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Dr. W. H. Garman Named Institute Regional Director

WASHINGTON — Dr. W. H. Garman has been appointed regional director for the National Plant Food Institute in the northeastern states, it was announced last week by Dr. Russell Coleman, executive vice president of the Institute.

Dr. Garman is the first of four regional directors to be appointed under the Institute's program to expand its research and educational activities. In addition to the four regional directors, other field personnel will be added to the Institute's staff to work under the regional directors in servicing particular states and areas.

Dr. Garman, who is chief agronomist for the Institute, will continue to serve as its chief agronomic consultant in addition to carrying on his specific responsibilities for heading up the Institute's expanded program of research and education in the Northeast. His territory will include New York, Pennsylvania, New Jersey, Maryland, Delaware, the New England States and possibly West Virginia.

Dr. Garman will give particular attention to Pennsylvania, Maryland, Delaware and possibly West Virginia in addition to his over-all responsibilities. It is contemplated that a field supervisor will be secured to assist Dr. Garman in servicing New York, New Jersey and the New England States, and that he will be located in the New England area. Dr. Garman will be located in the Institute's offices at 1700 K Street, N.W., Washington 6, D.C.

"We are particularly pleased to have had an opportunity to place a man of Dr. Garman's stature in this important position," said Dr. Coleman. "We believe that by reason of Dr. Garman's long association with the Institute he will be in a position to make rapid progress in achieving our program objectives in the northeastern states."

Specifically, Dr. Garman's duties will involve liaison between the fertilizer industry and the land-grant colleges, public agencies, bankers, farm

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Pacific Northwest Group To Enlarge Board

PORTLAND, ORE. — Members of the Pacific Northwest Plant Food Assn. has enlarged the board of directors to 11, with one to come from each of the nitrogen, phosphorus and potash groups of prime producers or suppliers.

Approval of the change in constitution and by-laws was announced by Leon S. Jackson, Portland, association secretary. The three groups of producers and suppliers will nominate members for the board at the association's annual meeting Oct. 3-5 at Sun Valley, Idaho. The three directors elected from these groups will serve "with only the powers of a director and with none of the powers of a voting member," according to the new by-laws.

AVIATION TRADE GROUP SURVEY SHOWS

Aerial Applicator Sales Top $90 Million In 1956; Operators List Needed Chemicals

MOST NEEDED DEVELOPMENTS

Operators in the NATA survey were asked: "What single development do you think would do the most to extend your season or increase the market for your services?" Answers which centered around chemicals are summarized below.

★ Chemical needed to dry up all weeds and defoliate soybeans so they can be harvested in one week from application.

★ A chemical spray to kill or control wild oats and wild buckwheat in small grain crops.

★ A substance that would effectively and economically hasten decomposition of straw and stalks.

★ A true defoliant on short staple, dry land cotton.

★ A chlorinated hydrocarbon for alfalfa aphid that would work in cooler weather.

★ Pelleted DDT.

★ Develop a good fungicide that can be sprayed from aircraft at low gallonage per acre for apples, peaches, tomatoes and potatoes.

★ Better chemical to work on brush during a longer period of the summer regardless of moisture.

★ A weed (cocklebur) control in soybeans.

★ Liquid spray control of plant diseases at low volume. A cheap carrier, other than diesel oil, with just as good spreading, penetrating and non-evaporating characteristics.

WASHINGTON—The average aerial applicating concern in 1956 treated about 57,000 acres with 761 hours of flying; dispensed 68,300 gallons of spray (concentrate and carrier) and 367,510 lb. powder dust; used 9.2 persons through either full or part-time employment; and had a gross income of $58,400 with a capital investment of $48,000.

This measure of the average aerial concern has been obtained in a survey completed by the agricultural activities division of the National Aviation Trades Assn.

Leading the list of products that the operators said they would like from the pesticide industry are a herbicide to control wild oats in wheat, a selected grass killer for cheat grass in wheat, a herbicide for wild buckwheat in wheat and small grains, a defoliant for soybeans and a chemical to hasten decomposition of straw and stalks.

Results were released by C. A. Parker, executive director of the association, who said that the survey constituted a sampling of about one in every 15 aerial applicators and brought returns from 30 of the most active agricultural states.

The survey originally was developed by Robert Monroe, Prescott, Ariz., during his term as head of agricultural activities of the association.

Mr. Parker said that, since there is a problem of determining the actual number of air applicators active in 1956, an accurate projection of overall industry values is difficult.

However, based on the survey returns, the association estimated that the aerial applicating industry has a total investment of $75 million and produced a gross reve-

(Continued on page 8)

Tsetse Fly Beaten Back in 10-Year Battle To Eradicate it from Big Area in Africa

UGANDA, AFRICA—The Ugande Tsetse Control Department has announced that the tsetse fly which originally infested some 8,200 square miles in northern and central Uganda, has been beaten back so that not more than 700 square miles continue to be infested.

The eradication program, begun in 1947, had as its objective to reclaim from the tsetse fly the "vast stretches" of country overrun by the pest since the 1930's. The program also aims to consolidate the reclamation by building barriers of settlement and cultivation across the routes used in former invasions by the pest.

In its final phase, the campaign has been concentrated in some 1,500 sq. miles of country in adjoining areas of southwest Lango and southeast Bunyoro.

Most important new development of the year in fighting the tsetse fly, it is stated, was the evolution of a means of eliminating the palpalis species of the fly, which lives in river areas, by applying insecticide to riverside vegetation.

This technique was worked out in field trials of residual insecticide carried out in the Sukulu-Tororo area of Bukedi.

Spraying was carried out along the Malawa River from a small aluminum dinghy when it was found this gave much better results than from the river bank. This reduced the cost of treatment and speeded up the process of clearing the river area.

The position has now been reached in tsetse control in Uganda, where the country can be regarded in two distinct zones.

A southeastern zone, covering about seven-tenths of Uganda's land surface, is now predominantly free of tsetse. In the northwest, the remaining three-tenths is still infested.

"Highest priority must still be given to completion of the reclamation from the morsitans and pallidipes species of the comparatively small remaining parts of the 8,200 sq. miles of country invaded by these tsetses in Karamoja, Acholi, Mengo, Lango and Bunyoro during the 1930's and early 1940's," the control department stated.

Last year there appeared a "very real danger" that the tsetse might succeed in advancing northeastward in northeastern Ankole. "This threat was countered by means of an urgently organized combined operation aimed at destroying all potential or actual tsetse habitat within a 15- to 30-mile zone across the whole of the advancing 'fly front.'"

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Diamond Black Leaf Operations Integrated With Diamond Alkali

CLEVELAND—Operations of Diamond Black Leaf Co., producer of agricultural chemicals for farm use and lawn and garden products for home use, have been integrated with the business interests of Diamond Alkali Co., Cleveland.

Loren P. Scoville, general manager of Diamond Alkali's Chlorinated Products Division, said that the former Diamond Black Leaf Co. organization now becomes Diamond Black Leaf Products, a unit of Diamond Alkali Co.

"The consolidation of Diamond Black Leaf operations and the addition of the extensive research and production facilities of Diamond Alkali will enable Diamond Black Leaf to provide better service to customers of both farm and home products," he said.

Stepan Chemical Purchases Ninol For $2 Million

CHICAGO—The Stepan Chemical Co., 20 N. Wacker Drive, Chicago, has concluded negotiations for the acquisition of Ninol Laboratories, Inc., Prudential Plaza, Chicago, and the properties in which it conducts its business, for approximately $2,000,000. The announcement was made in a joint statement by Alfred C. Stepan, Jr., president and founder of Stepan Chemical Co., and Jerome Kritchevsky, president of Ninol Laboratories, Inc. The acquisition of Ninol will increase the present annual sales of the Stepan Chemical Co. to approximately $16,000,000, Mr. Stepan said.

Ninol Laboratories, Inc., it is planned, will operate as a division of Stepan Chemical Co. Jerome Kritchevsky joins Stepan Chemical as a vice president and will be general manager of the Ninol division. He will also be a member of the board of directors, together with Dr. Theodore Kritchevsky, who was formerly vice president in charge of research and production of Ninol and who will remain in that capacity. Dr. Herbert Sanders, director of sales of Ninol, will continue as director of sales of Ninol division. Dr. David B. Hatcher, vice president and general manager of the Stepan company, will continue in the same position in the combined companies. Including the Ninol executives the Stepan administration group averages 42 years of age.

The addition of Ninol will broaden Stepan's product coverage in synthetic detergents and will add the fields of agricultural emulsifiers and industrial chemicals.

Sales, Revenue of W. R. Grace Gain In First Half of 1957

NEW YORK—W. R. Grace & Co. has reported increased sales and operating revenues but lower net earnings during the first half of 1957. For the first six months of this year sales and operating revenues were $228,997,000 as compared with $222,118,000 for the same period of 1956. Net income for the two periods respectively was $8,790,649 and $10,547,544.

In its semi-annual report to stockholders, the company stated that profits of its established businesses taken as a whole were slightly above those of last year's first semester, and in the case of the operating chemical divisions the increase was significant. The drop in net income was attributed to the costs of entering new businesses not yet in operation and to an expanded research and development program.

Net earnings per share of common stock, computed on the average number of shares outstanding, were $1.90 for the first half of 1957 as compared to $2.37 for the similar 1956 period. Including the company's equity in earnings in excess of dividends received from non-consolidated subsidiaries and 50%-owned companies, total earnings per common share for the six-month period amounted to $2.16 for this year against $2.62 in 1956.

Oregon Weed Conference Scheduled for Nov. 14-15

CORVALLIS, ORE.—The sixth annual Oregon Weed Conference will be held Nov. 14-15 with headquarters in Withycombe Hall at Oregon State College here. Rex Warren, Oregon State College extension farm crops specialist and conference secretary, said the program will include a review of new chemicals, research progress in studies of new chemicals and reports on how farmers are using chemicals.

Rutgers University Appointments Announced

NEW BRUNSWICK, N.J.—Rutgers University has announced the appointments of three agricultural economists at its college of agriculture. The three are John M. Hunter, Dr. Donald Gatty, and George McCloskey.

Mr. Hunter is a new assistant extension specialist in agricultural economics. He holds a degree from Rutgers. Dr. Gatty recently received his Ph.D. from New York State College of Agriculture and will be assistant professor of agricultural economics. Mr. McCloskey is a graduate of Rutgers and will be extension associate in agricultural marketing, carrying on an educational program with New Jersey farmers.

In addition, Rutgers announces the appointment of Dr. Anton van Diest, a native of The Netherlands, who will be a new assistant professor of soils.

Sites Suggested for New Oregon Station

PORTLAND, ORE.—Three sites have been suggested for the proposed Western Oregon horticultural, nursery and florist crop experiment station, Earl Price, dean and director of the Oregon State College School of Agriculture and Experiment Station, revealed here recently following a special meeting of college officials and farmer representatives from four counties.

Some 30 agricultural producers from Multnomah, Washington, Clackamas and Columbia counties recommended that Dean Price and his staff have responsibility of selecting the desired site. However Dean Price said that he and his staff will review their recommendation with a grower committee before final steps are taken.

An unused portion of the Multnomah County farm was suggested as one of the sites as only 60 to 80 acres are needed for the horticultural experiment farm. The group visited this site along with one in Washington County, 4 miles southwest of Hillsboro on the Tualatin river near Cornelius.

The third site, not visited by the group, is located along the Columbia River near Deer Island.

Connecticut Plans Conference on Tobacco

NEW HAVEN, CONN.—About 20 technical papers dealing with the chemistry of tobacco and tobacco smoke will be presented during the 11th tobacco chemists' research conference at The Connecticut Agricultural Experiment Station here on Oct. 10-11, the station has announced.

The conference is expected to bring together about 150 research workers from industry, experiment stations and U.S. Department of Agriculture for exchange of the latest findings in tobacco chemistry.

All who are interested in tobacco chemistry are welcome to attend the conference, it is stated. A registration desk at the Hotel Taft will be open during the evening of Oct. 9, but the next day, registration will be at the station.

Dr. Gordon Taylor and Dr. H. B. Vickery of the station are co-chairmen of the conference. Details of the meeting are being arranged by the staff of the station's tobacco laboratory and department of biochemistry. Committee reports, business sessions, and a banquet are included in the program.

U.S.I. OFFICE MOVE

LOS ANGELES—The Pacific Coast Division offices of U.S. Industrial Chemicals Co., Division of National Distillers & Chemical Corp., will be moved to 1901 W. 8th St., Los Angeles 57, effective Oct. 1, it has been announced by Robert E. Alexander, division sales manager.

Fertilizer Topics on Agenda for Annual Meeting of AOAC

WASHINGTON — Fertilizer sampling and analysis will be the subjects of two papers to be presented at the annual meeting of the Association of Official Agricultural Chemists, to be held Oct. 14-16 at the Shoreham Hotel here.

The two presentations are "Sampling and Preparation of Samples of Fertilizer," by E. D. Schall, Purdue University, and J. G. A. Fiskell and associates, Florida Agricultural Experiment Station; and "Analysis of Fertilizers," by J. A. Brabson and W. B. Wilhide, Tennessee Valley Authority, and K. G. Clark and associates, U.S. Department of Agriculture.

Clement Raphael Shabetai, scientific advisor to the Permanent International Bureau of Analytical Chemistry in Paris, will be a featured speaker at an opening session of the meeting. He will discuss the work of his organization and report on analytical methods currently used in European countries for foods, food adulterants and feeds.

The AOAC annual banquet on the evening of Oct. 14 will hear Watson Davis, head of Science Service, Washington, D.C., on the importance of disseminating information regarding science to the public.

A presidential address on "The Land Grant College and the AOAC" will be made at the Oct. 15 session by Dr. M. P. Etheredge, dean of science at Mississippi State College.

The Association of Official Agricultural Chemists brings together professional scientific workers in federal and state agencies that are concerned with enforcing laws and regulations on agricultural commodities and the scientists of the regulated industries. AOAC approves methods of analysis which are used for agricultural products, including foods, drugs, cosmetics, feeds, fertilizers and insecticides.

About 850 persons are expected to attend the annual meeting, at which more than 250 scientific papers will be presented.

William J. Purcell, Munson Executive, Dies

UTICA, N.Y.—William J. Purcell, general manager of the Munson Mill Machinery Co. of Utica, died in his sleep Sept. 14 at the age of 52. He is survived by his wife, Anne, and their daughter, Jane.

In 1948 Mr. Purcell was appointed as general manager of the 132-year-old Munson Co., and in 1951 became vice president.

New Mexico Farmers Boost Fertilizer Use

STATE COLLEGE, N.M.—New Mexico farmers continue to step-up their use of commercial fertilizers, Gordon B. Hoff, extension agronomist at New Mexico A&M College, reports. According to figures compiled from notices of shipments of fertilizers into the state, use of fertilizer is increasing 10 to 20% annually.

In the first half of 1957, New Mexico farmers used 30,705 tons or 2,000 more tons of commercial fertilizer than they used in 1956. Mr. Hoff estimates that about 6,000 to 7,000 tons will be shipped into the state during the last half of 1957, pushing total receipts for the year about 30% above receipts in 1956.

Five cotton growing counties used about 80% of the commercial fertilizer entering the state in 1956. Chaves County is credited with 8,018 tons; Dona Ana County, 6,892; Eddy County, 4,060; Lea County, 2,645, and Luna County, 1,366.

New Mexico farmers use more superphosphate than any other type of fertilizer. Anhydrous ammonia, urea and ammonium sulphate are the most popular sources of nitrogen, Mr. Hoff said.

R. S. Rydell

R. S. Rydell in New Smith-Douglass Post

NORFOLK, VA.—The board of directors of the Smith-Douglass Co., Inc., announced this week the election of R. S. Rydell as a vice president of the company to serve as vice president for chemical products.

Mr. Rydell, 37, has been president of the Coronet Phosphate division of Smith-Douglass since he joined the company in 1954, after 17 years' association with the plant food division of Swift & Co.

In his new position, Mr. Rydell will direct the production and sale of Smith-Douglass Chemical products, produced by Coronet Phosphate Co., near Plant City, Fla., where phosphate rock is mined for use in fertilizer and Coronet defluorinated phosphate feed supplement; Texas City (Texas) Chemical Co., which produces fertilizer, sulfuric acid, phosphoric acid and dicalcium phosphate for animal feed; San Jacinto Chemical Co., Houston, Texas, producer of anhydrous ammonia for agricultural and commercial use; the Smith-Rowland Co., producer of nitrogenous tankage and protein feed supplement; and potassium silico fluoride, manufactured by the parent Smith-Douglass Co. at Norfolk, Va., Streator, Ill., and Plant City, Fla.

The Smith-Rowland Co. is the oldest of the Smith-Douglass divisions. It has production plants at Norfolk, Granite City, Ill., and Selbyville, Del. Texas City Chemicals, Inc., with a plant in the Galveston-Houston area, is the newest Smith-Douglass acquisition, having been acquired in early 1957.

Sales and production of Smith-Douglass fertilizers will be directed by James H. Culpepper, vice president, who will head the company's fertilizer products division.

R. F. Hopkins, president of the San Jacinto Chemical Co. division at Houston, has also been elected vice president of Texas City Chemicals, Inc. In addition to directing these activities, he will head new products research for the firm.

James A. Monroe, vice president, directs the over-all company operations under W. R. Ashburn, who was named president of Smith-Douglass Aug. 1, 1957. Ralph B. Douglass is chairman of the board.

The Smith-Douglass Co. was founded in 1921 by the late Oscar F. Smith.

APHID PARASITES

SACRAMENTO—Parasites for control of the spotted alfalfa aphid are being distributed in northern California by the University of California in cooperation with local farm officials. Two years ago parasites were introduced into Antelope Valley in southern California. According to Robert W. Harper, chief of the California Bureau of Entomology, only 3,000 acres in the valley had to be sprayed in June this year compared with 20,000 acres in June, 1956.

WHITE LEAF IN FLORIDA

Pesticides on Front Line in Battle Against Rice Disease

WASHINGTON—A disease of rice that may be capable of seriously damaging the country's $200-million rice crop has been discovered at Belle Glade, Fla., just southeast of Lake Okeechobee, according to a joint announcement by the U.S. Department of Agriculture and the Florida State Plant Board. (See story on page 1 of the Sept. 23 issue of Croplife.)

Known in Spanish as "hoja blanca" or "white leaf," the disease has been under observation for the past few years in Cuba and Venezuela. The Florida finding is its first known occurrence in the U.S.

Rice plants and possibly certain grassy weeds are infected by the disease in the Belle Glade area. Whether it may affect other grains or grasses is unknown.

Since rice is not an important crop in Florida—commercial plantings there are estimated to total little more than 200 acres—the disease is not an economic problem in that state. However, hoja blanca is a threat to some 1½ million acres of commercial rice in other parts of the country, mainly in Arkansas, California, Louisiana, Mississippi, and Texas.

Officials of USDA's Agricultural Research Service and the Florida State Plant Board are now making a survey in southern Florida to determine the extent of the infestation. Very little research has been done so far on hoja blanca, either by the U.S. or other countries. USDA scientists emphasize that much more extensive studies of the disease than have so far been made are needed.

The initial finding of hoja blanca was made at USDA's Belle Glade experiment station, where rice has been grown for some years in connection with plant-disease research. A 40-acre field of rice adjacent to the station and volunteer rice in a field about 5 miles west of Belle Glade were also found infected.

Weeds that showed evidence of possible attack by the disease at this location are barnyard grass (Echinochloa colonum or E. crusgalli) and Panicum fasciculatum. Unlike rice, these apparent hosts of the disease grow widely throughout Florida and other southern states.

Arrangements have been made (1) to spray with insecticide all the infected areas found so far, as a means of destroying suspected insect carriers of the disease; (2) to plow under all infected rice in these areas; and (3) to destroy infected grasses with chemical weedkiller.

Hoja blanca was first observed in this hemisphere about 1954. It has been found in Costa Rica and Panama, as well as in Cuba and Venezuela, and caused an estimated 25% loss of the Cuban rice crop in 1956. The disease is not prevalent in the major rice producing areas of the Orient, although an apparently similar infection of rice is known in Japan.

Symptoms of the disease include yellowish-white discoloration or streaking of the leaves, and the plants often fail to head. Yields of rice in infected fields are often reduced 25 to 50%, and the disease is capable of completely ruining the crop, particularly late plantings.

How hoja blanca got into this country is not known. It is believed to be caused by a virus and to be spread by insects, probably leaf hoppers. Early this year, an entomologist of USDA's Agricultural Research Service began investigations in Cuba to determine the particular insect or insects that may be responsible for spreading the disease.

So far as department scientists know, hoja blanca is not seed borne, and they discount the possibility that it might have been brought in by imports from Cuba. U.S. plant quarantine regulations specifically forbid importation of rice and rice-plant materials from disease-infested areas.

All commercial varieties of rice grown in this country appear to be susceptible to hoja blanca. A search for resistant varieties was begun by USDA scientists a year ago, following preliminary study of the disease in Cuba. This survey, based on trial rice plantings in infected areas of Cuba and Venezuela, is already showing some promise.

About 4,000 varieties and strains of rice from USDA's world rice collection have been grown where the hoja-blanca virus is epidemic in an effort to discover plant resistance. So far, some 285 lines of short- and medium-grain rice have been found with appreciable resistance to the disease. Most of these are rice introductions from Japan, China, and Formosa.

Although none of the resistant lines so far discovered is equal in commercial acceptability to varieties now grown, some of them might serve in emergency, USDA said. They will also be used as breeding material for crossing with U.S. commercial varieties in an effort to produce new high-yielding, disease-resistant varieties.

No varieties of long-grain rice—especially important to southern U.S. growers—have been found with resistance to hoja blanca. However, time of planting is known to affect the susceptibility of rice plants to the disease, and there is a possibility that a shift in ordinary planting dates could permit the growing of present rice varieties even when hoja blanca is present.

To check this possibility, year-round planting studies with 5 commercial varieties of U.S. rice have been under way in Cuba since the fall of 1956. These include the long-grain varieties Bluebonnet 50, Century Patna 231, and Toro, and medium-grain varieties Nato and Zenith.

All additional varieties and strains of rice in the USDA world collection not previously tested—including some 3,000 entries—will be planted in Cuba and Venezuela next spring. At that time, late in the planting season, rice seems to be most susceptible to hoja blanca, and the test for disease resistance is therefore likely to be more conclusive, USDA said.

Increased Income On Family Farms Reported by USDA

WASHINGTON — Farm incomes on most types of commercial family-operated farms in the nation were larger in 1956 than the year before, the U.S. Department of Agriculture reports.

This is brought out in a study, "Farm Costs and Returns, 1956, With Comparisons," just published by the department. The study, made each year by economists of USDA's Agricultural Research Service, is focused on 28 types of commercial family-operated farms in important farming areas of the U.S.

Net income—income left after deducting charges, outlays and losses—on the family-operated farms in the study was larger in 1956 than in 1955. However, 10 of the types had lower net incomes in 1956. Incomes by types of farm ranged from about $13,900 on wheat-pea farms in the Washington-Idaho area, to a loss of about $1,240 on drouth-ridden cattle ranches of the Southwest.

The report points out that in 1956 net income per farm was only 34% of gross income, compared with 50% during the 1942-46 period. USDA economists give three reasons for this: (1) the declining importance of farm family labor in farm production, (2) increased mechanization on farms, and (3) the increase since 1952 in production costs relative to prices received by farmers for their products. As a result, the study says, farmers' purchasing power has declined more than a third since 1946.

The report shows that farming is fast becoming an occupation requiring substantial capital investments. For example, estimated total capital on these farms ranged from a little less than $10,000 on peanut-cotton farms in the southern coastal plains to more than $177,000 on sheep ranches in the Southwest.

Gross income on the 28 types of farms studied averaged more in 1956 than the year before. Chief reasons for this additional income are the increase in farm size and the amount of capital used per farm and the increased productivity.

A copy of the report (AIB No. 176) may be obtained from the Office of Information, U.S. Department of Agriculture, Washington, 25, D.C.

Missouri Tonnage Shows Increase

COLUMBIA, MO.—Missouri fertilizer sales during the first half of this year totaled 465,898 tons, an increase from 450,102 tons in the corresponding period in 1956.

The figure for the first half of this year included 81,028 tons of rock phosphate, while that for last year totaled 85,535 tons.

Sales of mixed goods dipped from 274,579 tons in the first six months of 1956 to 263,553 in the 1957 period.

Intensive Search Being Made for Pink Bollworm in Georgia

ATLANTA—An intensive survey to determine if the pink bollworm has gained entry in Georgia is being made by the Georgia Department of Entomology and the U.S. Department of Agriculture Plant Pest Control Division.

According to Bill Blasingame, state entomologist, if the bollworm is found in Georgia, he will immediately place that area in quarantine to prevent its spread. The quarantine, he added, would impose restrictions on the growing, ginning and handling of cotton.

Mr. Blasingame said the primary threat to Georgia and other southeastern states comes from migrating Mexican laborers brought in to help harvest the cotton.

He warned Georgia farmers using such labor to make a critical examination of any baggage and belongings such workers bring with them, especially cotton pick sacks and bedding.

Recently ten busloads of cotton pickers enroute from the Rio Grande Valley in Texas to Cordele, Ga., were intercepted at Bethany, La., with some 125 picking sacks that contained 65 lb. of cotton seed and harbored 423 live pink bollworms.

Mr. Blasingame said the small worm is so destructive that "he makes the boll weevil appear as only a second rate amateur threat to Georgia cotton."

AGRONOMY HANDBOOK

CLEMSON, S.C.—A revised pocket-sized edition of the Agronomy Handbook for South Carolina is now being distributed by the Clemson Extension Service. The circular gives brief, concise statements on the fertilizer and crop variety recommendations for the state, and recommendations for the production of field crops, grasses and legumes.

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INSECT AND PLANT DISEASE NOTES

Alfalfa Weevil Spreads in Virginia

BLACKSBURG, VA. — The alfalfa weevil this year achieved the status of the Virginia alfalfa grower's number 1 insect enemy.

Arthur P. Morris, associate entomologist at Virginia Polytechnic Institute, reports that at present only 10 southwestern counties in Virginia have not reported infestations. However, it is believed that even these counties are infested, but so lightly that the insects have not been found.

So far this year the weevil has been found as far west as Grayson, Wythe, Pulaski and Giles. In most counties, however, the weevil has necessitated widespread spraying.

The first appearance of the weevil in Virginia was in Loudoun and Fairfax in 1952. By 1953 it had spread into 16 counties in northern Virginia and some of the Northern Neck and Peninsula areas. In 1955 it had spread into around 60 counties and into North Carolina. By Feb. 1 of this year, 71 Virginia counties were known to be infested.

Insects Still Active in New Mexico Fields

STATE COLLEGE, N.M. — Cotton leafworms are generally heavy in all cotton growing areas of the state. Heaviest infestations are in Curry, Quay, Roosevelt, Lea, Dona Ana, Otero, and Hidalgo counties. Many fields are severely damaged where insecticides haven't been applied.

Cotton bollworm infestations are still generally heavy in Dona Ana, Eddy, Luna, and Hidalgo counties. Infestations in Chaves County are light to medium while build-ups are reported in Lea, Roosevelt, and Curry counties. Control is erratic as a result of poor timing, poor application, and rains in some areas.

Spider mites are building up in spotty infestations in Dona Ana, Eddy, and Chaves counties. Some spots are heavily infested. Cabbage loopers are building up in lettuce in Dona Ana, Eddy, Valencia, Bernalillo, and Lea counties. Growers are getting poor control in some fields.

Tomato hornworms are damaging tomatoes and chili in Dona Ana and Luna counties. Orchard mites are building up in many orchards during harvest in Lincoln, Rio Arriba, Santa Fe, Bernalillo, Valencia, and Sandoval counties.

Codling moth damage is running as high as 50% in apples being graded from some orchards in Santa Fe and Rio Arriba counties. An average 25 to 30% wormy apples is comm in many orchards. San Jose Scale building up heavy infestations orchards in Santa Fe and Rio Arri counties.

Army cutworms have run th course and are pupating in lawn gardens, and fields in Dona A County. Many lawns were severe damaged, and some alfalfa fields su fered moderate damage. Worms we heavily parasitized in most areas.

Grasshopper infestations are re ported on crops in Taos, Bernalillo San Juan, and Valencia counties Most infestations are light to me dium with moderate damage to al falfa in some areas. Grasshopper on range lands are reported in Col fax, Harding, Union, Sandoval, an Valencia counties. Infestations are light to heavy, with range grasse damaged in some sections.

Horn fly infestations on range ca tle are very heavy throughout th state. In some areas the flies numbe several hundred per head, and screw worms are a problem on range catt in San Miguel County.—John J. Du kin.

Texas Cotton Hit by Angular Leaf Spot

BIG SPRING, TEXAS — Angula leaf spot has been more severe i West Texas cotton areas than sinc 1954, it is reported. At that time ba terial blight had become so wid spread that yields were cut 25% i many fields.

It was then that farmers began growing a blight resistant cotton, which for the first year or two successfully withstood the disease. This year the fields are spotted with it.

One farmer puzzled by increasin damage is Hubert Hail of Tarzan Texas. He has 136 acres of irrigate cotton, fears the leaf spot will reduc production by 20 to 30 bales.

"I don't know what we can do," h said. "Control is difficult and the re sistant varieties are losing their re sistance. Unless new ones are de veloped, we'll have a hard tim staying in the cotton growing bus ness."

Insect Activity Tapers In Colorado Crop Areas

FT. COLLINS, COL. — With th advent of cooler weather, insect ac tivity in Colorado is beginning t taper off, Colorado State Universit entomologists have observed. Excep for a few late season pests, most in sects showed a decline in population early in September, according to recent report of the Colorado insec detection committee.

In Weld County, for example, a few seed corn maggots continue to be taken in bait traps, but adults of the sugar beet root maggot, spinach leaf miner and western wheat stem maggot have been missing from the collections for more than three weeks.

Dr. L. B. Daniels, chief entomol gist for the Colorado Agricultura Experiment Station and committe chairman, said bait traps have bee very successful in following the im portant economic pests. It is hope the program can be expanded in 195 to take in commercial plantings o onions, he said.

In the Arkansas Valley, egg de position of the tomato fruit worm continues low. The light trap a Rocky Ford (Otero County) show increasing numbers of the army worm, variegated cutworm and fal army worm. Several other species including the spotted cucumber bee tle, western corn rootworm an striped cucumber beetle, are also o the increase in the Arkansas Valley

Some potato and tomato fields in the San Luis Valley are showing severe symptoms of psyllid yellows

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caused by the tomato psyllid. The committee said mild to severe symptoms are evident in scattered fields from southern to northern counties on the Eastern Slope depending on how well control measures were carried out.

Most growers of certified potatoes report effective control of aphids through the use of insecticides in the last ten days.

The Mexican bean beetle has caused severe damage in some areas, but in general the damage is not as serious as it was in 1956.

Likewise, the two-spotted mite problem on corn is much less than last year. Observers have discovered very little injury to corn, and slightly more damage to sorghums.

Populations of the spotted alfalfa aphid remain static throughout the state. There has been no change in the past three weeks.

Arizona Warns Cotton Growers of Insect Danger

PHOENIX, ARIZ.—J. N. Roney, extension entomologist at the University of Arizona has warned cotton growers in the counties of Maricopa, Pinal, Yuma, Graman and Pima, that cotton insects such as spider mites, leaf perforators, wooly worms, beet armyworms, leaf worms and stink bugs can still cause injury to cotton in those areas of the state.

In Yuma county, the cotton leaf perforator and wooly worms are increasing in numbers and a few spider mites are also showing up. In Pinal and Pima Counties, cotton leaf perforators are causing the greatest concern. Some fields show spider mites to be on the increase.

Leaf perforators are of greatest importance among stink bugs, wooly worms and armyworms that are presently operating in Maricopa County. Spider mites have appeared in high numbers in the Peoria, Waddell, Chandler, Gilbert and Higley areas. Entomologists have recommended applications of 3% Aramite dust at 25 to 30 lb. an acre for control. Sprays at comparable strength, may also be effective, they say.

Saskatchewan Expects More Grasshoppers in 1958

REGINA, SASK., CANADA—Agriculture Minister I. C. Nollet has advised Saskatchewan farmers that they can expect increasing grasshopper infestations in many areas next year.

Grasshopper numbers have increased sharply over a wide area of the province, according to a survey conducted recently by the Field Crop Insect Laboratory of the Canada Department of Agriculture at Saskatoon. Indications for 1958 point to a heavier infestation than in any year since 1950.

The initial survey shows that a large number of grasshoppers may be expected along the southern part of the province generally, and in an elongated area extending from the southwest to Prince Albert. The west central portion of the province also shows signs of being infested with the pests next season.

This year considerable crop damage was done mainly in the south central and southeastern parts of the province. During the spring outbreak the Saskatchewan Department of Agriculture distributed about 12,000 gallons of control chemical.

Greater numbers and more activity from grasshoppers occurred in southern Saskatchewan in 1957 than was expected, and many areas untouched this season may have a fight against the pests in 1958. Sufficient infestations of adults exist now to produce severe outbreaks in 1958 if fall weather continues favorable to egg-laying, and next spring is warm and dry.

Mr. Nollet pointed out that where grasshoppers are found generally distributed in fields cropped this year, a fall surface tillage would probably reduce numbers emerging next spring. Where fall tillage is not advisable on infested fields due to danger of soil drying, plans should be made to reduce stubble grasshoppers in the spring by prehatching tillage.

Further surveys are in progress to obtain information on grasshopper numbers, from which a final forecast will be prepared and released.

Heavy Ragweed Count Found in Oregon Areas

SALEM, ORE.—The worst infestation of ragweed found so far in western Oregon has been in Josephine County, according to the state agriculture department. Approximately 25,000 acres of infested or potentially infested land was found in Josephine County. Jackson County infestation discovered so far totalled nearly 740 acres.

Under an agreement with Jackson County, the county is providing the spray equipment and directing the operation while the state will pay the costs of labor and materials. A contract has been let for spraying in Josephine County, Frank McKennon, plant division chief, said.

Hessian Flies Pester Illinois Wheat Growers

URBANA, ILL.—Hessian fly populations are still high throughout the wheat-growing sections of Illinois, even though they are lower than last year.

Steve Moore, entomologist with the University of Illinois College of Agriculture and State Natural History Survey, reports that surveying entomologists found an average of 6.3 fly pupae per 100 stems compared with 15.5 pupae a year ago.

To prevent the Hessian fly population from increasing, farmers are urged to follow suggested seeding dates. Even though wheat sown before the suggested date might escape serious damage this fall, early seeding could result in a serious buildup in population, Mr. Moore points out. In this event, a spring brood might cause serious losses to all fields regardless of seeding date.

Since the recommended seeding dates for Hessian fly control are the same dates that have given top wheat yields over a period of many years, Mr. Moore states that there is no logical reason why wheat growers should not follow them.

Sharpnosed Leafhoppers Reported in New Jersey

NEW BRUNSWICK, N.J. — Entomologists at Rutgers University, New Brunswick, have reported that fall flight of sharpnosed leafhoppers has begun in blueberry fields. Plant propagators who desire to date certification against blueberry stunt disease are required to spray or dust "mother plants" from which cutting wood is taken, the extension service has advised.

Propagators who need to treat mother plants are advised to apply 4 lb. 50% DDT wettable powder to 100 gal. at the rate of 125-150 gal. an acre as a spray, or 30 lb. 10% DDT dust an acre.

Armyworms Attack Texas Grain Sorghums

AMARILLO, TEXAS—Armyworms are attacking irrigated grain sorghums in the Amarillo area. Heretofore grain sorghums have needed no insect control measures, but this year armyworm infestations have been reported in several sections of the plains area. They are being combatted by spray planes and ground rigs.

ALFALFA DOES WELL

EAST LANSING, MICH.—Vernal alfalfa has been giving very promising results in tests at Michigan State University, reports H. M. Brown, farm crops researcher. He says, during the past three years, Vernal has proven itself a good producer, winter hardy and resistant to bacterial wilt that often thins alfalfa stands.

R. K. Yancey

SALES MANAGER — R. K. Yancey has been named general sales manager of the J. B. Ehrsam & Sons Mfg. Co., Enterprise, Kansas, according to an announcement by W. J. Ehrsam, Jr., president of the firm. Mr. Yancey joined the company in 1945, and has served as chief draftsman, district manager at Fort Worth and general manager of Ehrsam Pacific, Inc., a subsidiary company, Riverside, Cal. The Ehrsam firm has sales offices in Atlanta, Denver and Kansas City. Among products which it produces is fertilizer manufacturing equipment.

Phosphate Increases Alfalfa Yields

ST. PAUL — In many areas of Minnesota—particularly in west central counties—phosphorus is the plant nutrient most needed to increase alfalfa growth. That conclusion is based on field tests underway at the West Central Experiment Station, Morris. The tests are conducted by A. C. Caldwell, University of Minnesota soils scientist, in cooperation with Roy Thompson, Morris station agronomist.

Mr. Caldwell and Mr. Thompson are comparing nitrogen, phosphate and potash alone and in different combinations on alfalfa fields. In first cuttings this summer, plots that received 80 lb. of phosphate per acre, but no other nutrient, averaged 1,434 lb. of forage per acre more than unfertilized plots. That was higher than for any other fertilizer treatment used.

July Super Output Shows Gain from Year Ago

WASHINGTON — Production of superphosphate and other phosphatic materials during July totaled 162,974 short tons, a gain over 136,778 short tons in July, 1956, the Bureau of the Census has reported. July shipments amounted to 105,358 short tons, compared with 96,280 in July a year ago. Stocks on hand at the end of last July totaled 308,443 short tons, a reduction from 404,796 a year earlier.

Included in the July, 1957 output were 73,656 tons of normal and enriched, 76,606 of concentrated and 12,712 of other phosphatic fertilizers, including wet-base goods.

GEORGIA RECOMMENDATION

ATHENS, GA. — Georgia farmers have been recommended by University of Georgia extension agronomists to fertilize alfalfa fields. Recommendations include two to three tons of agricultural limestone per acre, well distributed over the field; 800 to 1,000 lb. of 4-12-12 and 20 lb. of borax per acre. To keep the stand highly productive, say the agronomists, each year alfalfa should receive 800 to 1,000 lb. of 0-10-20 and 20 lb. of borax per acre.

International Flavor Seen at American Chemical Paint Co. 34-Nation Convention

AMBLER, PA. — A meeting of world-wide interest, sponsored by American Chemical Paint Co., was held here Sept. 23-28, with delegates present from some 34 nations. Each delegate was a key research, development, or expansion executive of private enterprises in the chemical field, and associates of the sponsoring company.

Subjects discussed at the meeting included weed and brush control chemicals, with speakers representing the U.S. Department of Agriculture, land grant colleges, U.S. Department of the Interior, and the industry.

Among the speakers scheduled to appear, were Dr. W. B. Ennis, head of the weed investigation section of USDA; Dr. O. Lee, professor of botany, Purdue University, Lafayette, Ind.; Dr. C. Fisher, superintendent of the Texas Agricultural Experiment Station; Ralph Kauffman, manager of the chemical brush control division of the Asplundh Tree Expert Co.; Dr. B. H. Grigsby, professor of botany and plant pathology at Michigan State University; Dr. M. B. Hoffman, professor of pomology at Cornell University; W. Dykstra from the U.S. Department of Interior Fish and Wildlife Service; Dr. S. Fertig, professor of agronomy at Cornell University, and Dr. W. C. Shaw of the weed investigation section, USDA.

Among the American Chemical Paint Co. officials addressing the delegates were: Leon Cherksey, chairman of the board; Gerald C. Romig, president; John O. J. Shellenberger, vice president and director of marketing; F. P. Spruance, Jr., vice president, general sales manager of the Metalworking Division; Alfred Douty, director of research, and R. H. Beatty, director of agricultural research.

Countries represented at the convention, according to ACP included the following: Antigua, Argentina, Australia, Barbados, Belgium, Belgian Congo, Brazil, Canada, Chile, Colombia, Cuba, Denmark, Dominican Republic, England, France, Germany, Hawaii, India, Italy, Mexico, Japan, Morocco, Netherlands Guiana, New Zealand, Norway, Panama, Puerto Rico, South Africa, Spain, Sweden, Switzerland, Trinidad, Uruguay and Venezuela.

Leon Cherksey, chairman of the ACP board of directors, in commenting on the company's international convention, said, "The sessions of the convention are both educational and technical; they mirror the most effective methods developed for the use of established products here in America and abroad as the delegates participate in the exchange of first-hand knowledge of the processes and practices found most successful in the anti-corrosion treatment of metals and the chemical methods of weed eradication. In many respects, the sessions have a United Nations flavor that parallels its all-for-one-and-one-for-all purposes."

Development of Nematocides Important Industry Function

By Roy Hansberry*
Assistant Director, Agricultural Research Division
Shell Development Co.
Modesto, California

The science of nematology in America is almost unique in its close relation with industrial research and development. Before 1943 when Dr. Walter Carter first demonstrated the useful property of a mixture of dichloropanes and dichloropropenes in soil beneficiation, nematology was largely a study of the zoologists. A few plant pathologists carried minor projects on control of root knot nematode without much success—the bulb growers in the Pacific Northwest were worried about disinfection of narcissus bulbs for the bulb nematode—and that was about the extent of applied phytonematology.

Some scientists were collecting and identifying many types of nematodes from soil and recording with interest and in some cases with concern the fact that they appeared to parasitize plants. Gerald Thorne at Salt Lake for many years has been a voice crying in the Utah wilderness. He and a few sugar beet growers could see how important nematodes were becoming. The vegetable growers of the irrigated West frequently came for advice and to request government assistance on their problems with root knot nematode.

During the next five years D-D soil fumigant and ethylene dibromide played their most important role in demonstrating the extent to which the nematode had been damaging crops, a damage which was largely unexpected. This almost unique role of an agricultural chemical as a research tool continues right up to the present time. (A few weeks ago it was observed in Idaho for the first time that apple trees growing in fumigated soil had established themselves and increased their growth over trees in unfumigated soil.)

We once thought that nematodes were pests of warm, light soils of the southern half of the U.S. We are still learning how widespread the damage from nematodes is. We realize more than ever before that cherries, pears, apples and prunes in the northern tiers of states are suffering from attacks of nematodes, possibly complexed with other microorganisms in the soil. Industrial nematocidal fumigants are the principal tool in this research.

I would like to discuss here specifically the responsibility of industry to the grower. One could perhaps minimize this responsibility by considering that supplying a uniform and effective product at a reasonable price fulfills the obligation. If we were discussing fertilizer or insecticides, perhaps this might be true. The necessity for, or the value of, a fertilizer or insecticide is well known. Equipment is available for efficient and accurate application. The nutritional needs of the plant or the life history of the insect is well known by every state extension man and by every county agent. In short, when we in industry sell a fertilizer or an insecticide, we are supplying a product which fits easily into a well established pattern.

Almost none of this is true with a nematocide. Many growers have never seen a nematode. They know their lawn turns brown, that their corn has stubby roots and their trees wither and die. They know that their neighbors have prevented this condition by fumigating the soil with a nematocide. But this is not enough —we in industry have to show them how to fumigate. It is a fact that the product cannot be delivered to the grower and the salesman walk away with his money in his hand and a satisfied customer assured. There are just too many things that can go wrong with a soil fumigation to permit the operation to be done carelessly or without technical advice. Our job and our responsibility then are as simple or as difficult as this—to make every user of soil fumigants an expert in their application.

This concept brings in our mutual responsibility with governmental agencies, both federal and state. We need the help of well-informed federal and state men to extend our recommendations. It is obvious to us that many applications of nematocides are made with less than a complete understanding of proper procedure. There have been occasional reports of failure of the products to control nematodes or of injury to crops by the soil fumigants. If such a report is made to us, we try very hard to learn the reason for the failure. In every single case that we have looked into, we have found a lack of knowledge or a misunderstanding of recommended techniques of application.

Sometimes the dosage that is recommended for an overall treatment is concentrated into rows or tree planting sites. Occasionally recommended procedures for soil preparation or waiting period between application and planting are overlooked or misunderstood. Growers sometimes take a chance on the assumption that the crop is going to be lost if no treatment is made or if a necessary waiting period is fully observed. The commonest of all causes of trouble is a misunderstood dosage recommendation. I think, then, that our greatest responsibility is concern for proper dosage rate.

Since the need for more knowledge is obvious and since it is equally obvious that we cannot supply personal supervision to each application, it seems that education is a general responsibility, first the professional farm advisers, second, our own distributors and dealers and finally the growers themselves. Most of you have seen some of the publications with which we attempt this education: a nematode wall chart listing the commonest plant parasitic nematodes and the crops which they attack, well illustrated booklets on nematode control practices, scientific studies carried on by our research group and published in a number of journals, and of course talks and meetings of many kinds.

I think that at least the experiment station and federal government personnel working on nematode problems are almost to a man personally acquainted with the nematologists in industry. This is due not so much to any great reputation as authorities that these men might have but rather to regular visits which industrial people make to every tax-supported center of research and advisory work.

The rapid general increase in knowledge on nematode biology and control both reduces and increases the responsibility of industry. Every man who becomes informed on nematology seems to stimulate interest in two more men who have questions to ask.

If I seem to have placed industrial nematologists on a pedestal as a fountainhead of nematological knowledge, it was not my intention to do so. We, in industry, have a great responsibility to learn what the nematode problems are in the areas we serve. If you will recall the visits that our people have made to your laboratories and farms, you will realize that we have more often asked questions than volunteered information. Perhaps the most useful thing we do is to collect information in one area and pass it along to another.

You might think of us in the Nineteenth Century sense of the itinerant peddler who was always welcome as a unique and timely source of rural and community news and gossip. Since the advent of soil fumigants, demand for knowledge has increased so rapidly that industry's greatest job has been dissemination of information rather than salesmanship. Perhaps we never before realized so well how effective technical information can be as a sales tool.

We in industry have responsibilities other than the dissemination of information on nematodes and their control. We must collect and collate knowledge on residues, on safe handling methods, and, of course, on effective usage. While residue and detailed toxicology data as required for insecticides are not yet required by federal law for preplanting soil fumigants, we nevertheless feel an obligation to obtain this information and have it available if and when needed. While much of the basic data can be obtained in our own laboratories, practical experience in use under field conditions must be largely supplied by the tax-supported research agencies.

We are anxious to cooperate in planning these experiments, in supplying materials for them, in some cases helping with the analytical work and even with the applications or data collection. Where these are problems of major local interest, such experiments will be initiated by experiment station personnel as part of their own program. In a few cases where local resources were inadequate to supply this information, grants-in-aid have been made by industry to help defray the cost of obtaining such information. While industry feels that the collection of these data is primarily a responsibility of tax-supported stations, we are always glad to discuss the possible means of industrial cooperation toward this end, whether such cooperation involves material, information, equipment, time or money.

The emergence of plant nematology as an independent science has been one of the dramatic and fundamental developments in agriculture. We modestly feel that industrial research contributed a lot to the speed and soundness of this advance in knowledge. The example of cooperation between industrial and tax-supported research is one we can be proud of. We expect the next ten years to be even more stimulating and productive than the past ten years. We in industry are glad to be a part of it.

* Paper presented at Shell Nematology Workshop, Orlando, Fla.

Disease Takes Heavy Toll of Texas Small Grain in 1957

COLLEGE STATION, TEXAS—Small grain diseases during the current year have cost Texas producers millions of dollars. A study of the situation made by agronomy and plant pathology research workers of the Texas Agricultural Experiment Station showed the losses to be the greatest for any year since 1949, approximately $18 million.

Harlan Smith, extension plant pathologist, said the loss in bushels of grain was actually only a part of the accumulated losses to farmers. Disease caused severe lodging in many fields and this in combination with other diseases greatly increased the harvesting costs. Test weights were lowered with a reduction in selling prices and much of the grain had a low germination. Oats which were damaged by Helminthosporium were especially low in germination tests.

Mr. Smith pointed out that an estimated 10.5% of the state's wheat crop was lost to diseases. Taken as a group, leaf, stem and stripe rusts accounted for 5.6% of the losses. An estimated 4.8 percent of the losses were charged to Septoria tritici, a fungus disease.

Oat growers lost an estimated 28.2% of their crops to diseases. Seed treatment, resistant varieties and crop rotation could have materially cut the 13.6 percent loss to Helminthosporium, a seed borne disease, Mr. Smith said. The loss in bushels amounted to over 7,000,000. Crown and stem rust together caused losses amounting to an estimated 13.2%. Seed treatment is recommended for controlling smut which caused a loss of about 134,000 bu.

Barley losses were estimated at just under 6.5% with Helminthosporium the worst offender.

Garden Supply Group Proposed in Washington

YAKIMA, WASH.—A group of Washington retailers recently met to plan a state garden dealers' association aimed at strengthening merchandising of garden supply items through feed, seed, farm supply and nursery outlets.

The preliminary meeting was attended by Wes Farwell, Bleyhl's Inc., Sunnyside; Al Kleweno, Bohlke Feed Store, Selah; Wilbur Logan, Reservation Feed Mill, Wapato; Robert Offerdahl, Bleyhl's Inc., Grandview; Barney Smith, Yakima, and host Bill Serr, Summitview Garden Center.

Purpose of the association is to help members with additional garden supply sales through merchandising and sales techniques. Organizers said that home gardening is the nation's leading hobby and sales of supplies top the billion dollar mark annually.

EMPLOYEES HONORED—Four Smith-Douglass Norfolk factory employees were honored at a recent ceremony in recognition of their length of service. Left to right are Herman Powers, Norfolk factory superintendent; L. M. Hanbury, who received a 20-year pin; W. J. Rountrey, G. E. Ketchum, and J. W. Cannon, who each received 10-year pins, and J. H. Zwemer, Smith-Douglass production manager, who made the presentations.

American Cyanamid Sets Up Regional Farm And Home Sales Offices

NEW YORK — Establishment of regional offices in Chicago, Dallas, Los Angeles and New York City for the sales management of all Farm and Home Division products of American Cyanamid Co. has been announced by Burton F. Bowman, division director of marketing.

Named as managers of the regional offices are John H. Howard, midwestern region; Ira O. Sturkie, southern region; Hamilton E. Clark, western region; and Clyde R. Kennedy, eastern region.

Mr. Bowman said that the Farm and Home Division markets a full line of products for virtually every aspect of the agricultural industry. He said the regional offices will be supported by the division's extensive merchandising and marketing resources, which will give additional service benefits to product users.

At present the Farm and Home Division sells some 175 products including Aureomycin (chlortetracycline) for the agriculture, livestock and poultry industries, vitamin and medicated feed supplements, veterinary medicines, insecticides, lawn and garden products, and Acronize, a product which retards bacterial spoilage of poultry and fish.

Mr. Howard advances from food industries manager to his present position. He joined American Cyanamid in 1955 as supervisor of baking and dairy sales for the Fine Chemicals Division following 10 years with Rockwood & Co., Brooklyn, N.Y. as assistant sales manager.

Mr. Sturkie was the manager of the animal health department immediately prior to his new appointment. With the company since 1944, Mr. Sturkie has served in several managerial capacities including that of regional sales manager for veterinary products. His earlier experience includes being county agricultural agent with the Texas Extension Service, and several years as a vocational agriculture teacher in Texas.

Mr. Clark's last position was manager of the Farm and Home Division's western sales region. He joined the company in 1948, serving first as a veterinary products representative and later as an animal feed representative. In 1953 he was promoted to field sales manager, animal feed department and in 1954 was made sales manager, animal feed department.

Mr. Kennedy has been with American Cyanamid for 19 years, most recently as manager of consumer products field sales. Beginning his career with the company as a salesman, he advanced from district manager in New Orleans for the Lederle Laboratories Division to the post of assistant regional manager and then to regional manager. He joined the Farm and Home Division when it was established in January of this year.

Texas Anhydrous Group Plans Meeting

AMARILLO, TEXAS—The fifth annual convention of the Anhydrous Ammonia Association of Texas will be held at the Herring Hotel here Oct. 13-15, according to an announcement by T. C. Duffie, Quality Fertilizer Co., Chillicothe, Texas, secretary-treasurer.

Among the speakers will be M. K. Thornton, Texas state agricultural chemist, who will talk about "The Biological Transformation of NH_3 in the Soil," and Dr. Thomas C. Longnecker, High Plains Station, Texas Research Foundation, who will discuss the present and predicted use of anhydrous ammonia in Texas.

W. E. Kirkpatrick, Kirkpatrick Sales Co., Dimmitt, Texas, vice president of the association, is program chairman for the convention. A tour of the Phillips Chemical Co. plant at Etter, Texas, will be held Oct. 15.

Gibberellins Show Promise in Grape Culture

DAVIS, CAL. — An experimental plant growth regulator shows promise of increasing set, size and stem length of grapes, growers of the University of California Grape Day at Davis were told.

The new gibberellins, used as a spray on Black Corinth grapes (Zante Currant), produced an excellent set, said Robert J. Weaver, associate viticulturist at the University of California. Berry weight of gibberellin-treated grapes increased to as much as twice that of grapes in which set was induced by the practice of girdling. Sprayed fruit developed much larger berries than fruit from vines that were girdled but not sprayed. Tests with Thompson Seedless grapes suggest that gibberellin compounds may be of use on that variety for berry enlargement.

"Gibberellin at five parts per million," Mr. Weaver reported, "produced slightly smaller berries than did girdling alone, but the compound at 20 parts per million resulted in berries about the same size as girdling alone produced. Very large berries were produced by the compound at 50 parts per million."

Another effect of the growth regulating compound he described was elongation of cluster parts. This, he said, would be of great value in sanitation problems; spreading out of cluster parts would decrease the amount of rot. He displayed Zinfandel grape clusters that had been sprayed with varying concentrations of gibberellin. At one part per million there was some elongation of cluster parts and thus a less-compact cluster. Ten parts per million produced fairly loose clusters of good fruit. At 100 ppm. and 1000 ppm. berries were too straggly or even failed to develop.

Helicopter Spraying Looks Promising in California

SACRAMENTO—After an experimental attempt at spraying some 60 acres of lodgepole pine in the northeastern portion of Yosemite National Park by helicopter, Emil F. Ernst, park forester, reports the use of whirly birds looks promising for this purpose.

Flying at tree top levels at 9,000 ft. above sea level, Robert T. Gilbreath, pilot, conducted experiments for two days. He sprayed malathion from jets mounted on booms to combat the needle miner which is turning the tall pines brown and killing them in that particular section of the national park.

Four years ago, the park service attempted an aerial spray program using B18 bombers but results were not satisfactory. The helicopter, however, enables individual trees to be sprayed since it can reduce speed to only 20 miles an hour.

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NATA SURVEY

(Continued from page 1)

nue in 1956 of more than $90 million.

Total hours flown approached the one million mark, a gain over the 851,900 hours in 1955 and 644,000 in 1954 reported by Civil Aeronautics Authority. The association also estimated that the area covered last year may have topped 80 million acres, in comparison to 60 million in 1955 and 38 million in 1954.

Spraying in 1956 outran dusting in acres covered by 4 to 1, with fertilizing the next in order of acres covered.

More than half of those reporting showed that their total business was entirely, or nearly so, from aerial applicator activity. Eighty-three percent of the key people involved, heads of concerns, owners, etc., flew agricultural work themselves.

Piper models of aircraft were reported in excess of any other type. Only 5% reported using multi-engine aircraft and the average planes in use per concern ran 4.2 for the year.

Forty-three percent had a capital investment of under $20,000. Returns, however, ran all the way to one company that reported upwards of $500,000, with those in the neighborhood of $150,000 to $250,000 constituting a rather surprising percentage.

The largest group with respect to gross revenues was that of approximately $15,000, with about 10% of the returns falling equally in each of the categories of $10,000, $25,000, $45,000 and $125,000. Six percent of the reports ran upwards of $200,000 gross revenue and two were over $200,000.

Some information regarding insurance showed that about 50% felt that public liability, drift and property damage insurance should be purchased by the acre treated. One third of those reporting favored purchasing such coverage by the airplane, with the balance desiring such to be supplied by the hour flown. It was shown, however, that the great majority now purchased it by the airplane.

Fifty-five percent of the companies involved in the survey answers indicated that they carried workmen's compensation insurance, with about one half the group falling in limits under $50,000 on liability. Only about one third showed that their insurance extended coverage to the grower.

The largest number of accidents was in spraying and ran about five times that of dusting. The area sprayed ran some four times the acreage dusted. The next highest area of accidents reported was "on ground." It appears that applicators have come to terms out of court with respect to claims made against them in the very great majority of cases. The dollar value of claims settled was surprisingly low, the survey revealed.

A small number of acres had to be retreated in order to fulfill a guarantee or obtain customer satisfaction. Out of the total acres reported less than 1% were done over.

The survey indicated that the majority belong to some type of state operators' or applicators' association, but only slightly more than one third of those reporting belong to NATA. Forty percent of those reporting were either college graduates or had attended college, with about 44% listing the proprietor as a high school graduate. Experience in air application of the key party involved ran to 9.2 years as the average.

Regarding the matter of a CAA air agency part or an air applicator pilot rating being established, those opposing were in the majority in both instances with some 54% against a pilot rating and about 66% opposing the air agency concept.

A high majority indicated that they were in favor of making use of shoulder harness in applicator aircraft mandatory, with about two thirds of those reporting also favoring a mandatory requirement for crash helmets. In contrast to this, however, roughly 90% opposed any such thing as a mandatory stall warning device.

The report indicates that there are about two state colleges conducting research for improvement of air application in comparison with each one that does not cover this field. About 65% reporting indicated that a short course for dusters and sprayers was held currently in their state, with applicators (involved in the report) having attended an average total of some three courses each.

Eighty percent reported that a shortage of agricultural pilots exists and an even higher percentage are apparently convinced of the need and desirability for "ag" pilot schools. It was determined, however, that less than one pilot per year could be absorbed per concern.

Eighty percent indicated they would like to have some type of professional journal covering "ag" aviation. Development of an accounting system tailored to "ag" aviation was not indicated by the majority as being necessary.

Eighty-three percent of the returns showed that the applicator is enjoying cooperation from his county agent, with but few applicators not having asked for assistance and cooperation from that quarter.

In the equipment field, 90% stated they felt that the present nozzles available for spraying were satisfactory.

A majority reported adequate medical facilities available for checking organic phosphate poisoning, and about one-half of those who did not indicate facilities as being currently available anticipated that such facilities would be established for 1957.

In the marketing field, about 60% indicated that they furnished a "package deal" to the customer.

In the survey, air applicators were asked to state opinions on a number of points. The first of these was for an expression of opinion on the chemical products that they felt were needed for particular pests and crops which are not presently available.

The need for a herbicide to control wild oats in wheat and small grains was the single "most mentioned" item in the reports. The need for a selected grass killer to control cheat grass in wheat, a herbicide for wild buckwheat in wheat and small grains, and a non-toxic chemical to fight the aphid in alfalfa and clover were also mentioned several times.

Highlights of the statements of need by aerial operators are shown elsewhere in this article.

Under the question of the "single most needed development" was an outstanding number of remarks relating to the need for better education. This included statements calling for a concerted educational program directed toward the grower regarding aerial application, what it can accomplish and proper use of chemicals. Development of better knowledge regarding the farmer, his needs and his crops, on the part of applicator was noted.

One comment did not believe that many farmers realized what aerial application could accomplish under conditions of emergency. Further soil conservation education of the farmer was quoted as most needed as well as additional help to aerial applicators regarding air application needed from "ag" colleges and extension services. Further public education through county agents, farm magazines, newspapers, as well as increased educational efforts by the various states, were stated as needed, including use of documentary films.

The next most quoted item and which was mentioned in about 10% of the replies related to fertilizing by air and fertilizers. The need for a concentrated fertilizer for more efficient use by air and to enable aerial services to compete with ground applications of fertilizer was noted. Improvements in fertilizers, the expansion of work to fertilize forest areas, and a better liquid fertilizer were particularly mentioned as one of the greatest needs in the industry.

A number of complaints were received regarding the present high cost of chemicals and a reduction in price levels as being a great boon to the aerial applicator. The lack of moisture during 1956 in many areas was fully reflected in the survey returns as having constituted a costly shortcoming. Miscellaneous complaints included the limited season of crop work and limited opportunities existing in some areas. The problem of farm prices as a deterrent to good business in the air applicator field was mentioned numerous times.

In special questions asked, the survey requested statements of opinion as to what constituted the greatest problem in conducting air applicator operations.

The largest single group of comments, constituting 25% of all who made statements on this subject, indicated that their biggest problem was in qualified and adequate personnel with special reference to pilots. This supported the individual question that had been posed in the survey regarding opinions on pilot shortage and need for pilot schools. In these the survey had shown that 87% of those reporting claimed such a pilot shortage with a slightly higher percentage ascertaining the need for "ag" pilot schools.

The personnel problem was followed closely by some 23% who listed weather as their greatest problem with noticeable reference being made to the existing limits under which present sprays can be used with respect to wind and the need for expansion in this limitation.

Cut-rate operators and unethical practices on the part of competitors as well as operators who lack proper information on costs were seen by 13% as the biggest problem confronting them.

Collections were the major problem to some 11%, while 12% indicated a need to find additional activities to expand the present "all too short" season and the problem of too great a concentration of activity required during its run.

A number mentioned the need for further education of the grower regarding the advantages of air application and commented on the lack of knowledge of what aerial application can accomplish.

Regarding the greatest needs and difficulties in obtaining parts, the distance at which many applicators are located from suppliers and the delays attendant to this at the very time when fast service is needed the most were the principal problems. Only a handful of remarks was received regarding actual scarcity of airplane or engine parts.

A question regarding existing nozzles and a question on "improvements wanted" brought but a few replies. Of interest are the following:

★ Several replies referred to leakage as still being a problem and that more positive shut-off would be desirable.

★ Stainless steel may be needed in fertilizers instead of brass, and wherever nitrogen solutions are utilized.

★ A nozzle immediately adaptable to all micron sizes and gallonage output.

★ Obtaining uniform droplet size is a problem and a convenient, quick adjustment to varied droplet sizes is needed.

★ Diaphragm material could be improved.

The relatively small amount of replies regarding nozzles follows the thinking indicated in a specific question in the survey in which 90% answered in the affirmative to the question, "Are the nozzles available satisfactory?"

The survey included one lonely comment to the effect that the biggest problem of that particular individual was to make enough money to be able to join his natioanl organization—the NATA.

MOST NEEDED CHEMICALS

TYPE CHEMICAL	PEST	CROP
Herbicide	Wild Oats	Wheat, Small Grains
Fungicide	Mildew	Lettuce, Cantaloupe
Insecticide	Cabbage Looper	Lettuce, Cabbage, Cotton
Weed Killer	Annual Weeds	Wheat, Barley
Chemical to kill hardwood trees in pine forests		
Longer lasting chems.	Mosquitoes & Gnats	Town & Swamp Areas
Chemical	Broadleaf Weeds	Beans
Improved and Lower Cost Chemical	Mites	Row Crops, Fruit
Improved and Lower Cost Chemical	Aphids	Row Crops, Fruit
Chemical	Thrips	Beans
Selective Hormone	Bind Weed	Wheat
Herbicide	Thistle	Peas
Low Gallonage/Acre Fungicide	Blight	Tomatoes, Potatoes
Low Gallonage/Acre Fungicide	Scab	Apples
Low Gallonage/Acre Fungicide	Brown Rot	Peaches
Insecticide	Cut Worms	Cereal Grains
Chlorinated Hyrocarbon	Alfalfa Aphid	Alfalfa
Liquid Arsenic that works	Boll Weevil	Cotton
Better Defoliant		Soybeans, Cotton
Insecticide that could be economically used on a large scale	Mosquito	Rice
Non-Toxic Insecticidal Dust	European Elm Scale	Elm Trees
Weed Killer	Johnson Grass	Corn
New Chemical	Cabbage Looper	Cole Crops & Cotton

Boron Deficiency

ST. PAUL—In some areas of Minnesota, farmers working for top alfalfa yields may need to add boron to the soil. Charles Simkins, extension soils specialist at the University of Minnesota, says that in some sandy soils in eastern Minnesota boron deficiency has shown up where heavy rates of lime and potash fertilizer have been used. Most of this trouble, Mr. Simkins says, is more likely to occur on legumes, which require more boron than most other crops.

Special Merchandising Section

Better Selling

Marketing News and Features

Are You Kidding Yourself About Your Profits?

By Fredrick G. Disney, Management Consultant, Fort Worth, Texas

Basic to accurate profit determination is a system of accurate and meaningful accounting. The words accurate and meaningful are very significant because not all accounting systems convey a realistic picture of the results of operations. Although the proper mechanics of accounting may assure a balancing of debits and credits, this procedure will not of itself tell the whole profit story. Such information must be interpreted to provide the manager with a sound basis on which to direct future operations.

To be sure, consideration of the accounting procedures is necessary, since a figure of net profit has to be derived from some system. However, to managers, the detailed procedures of bookkeeping are of little interest as compared to the ways these techniques can be applied to policy decisions.

There are four major areas in which you can kid yourself about your profits. They are: (1) The existence of a profit, (2) the sufficiency of the profit, (3) the profit mix, and (4) the profit trend.

THE EXISTENCE OF A PROFIT: A good first question to ask is: "Do I actually have a real profit?" You must realize that a final answer to this question is not necessarily indicated by the figure of "Net Profit" shown on the profit-and-loss (P and L) statement. To make sure that you are not being misled by this figure, you must analyze the basis of it.

• **Analyzing the Basis of Net Profit.** An orderly procedure is to start at the top of the P and L statement and compare every item with its counterpart in several other operating periods. A questioning attitude about each figure on the statement will help you to evaluate the true situation. You should not accept figures at their face value, but rather look behind the scene of each one to ferret out any hidden meanings.

• **A Word About Profit and Loss Statments.** There are two principal methods of reporting income and expenses on the P and L statement—the Cash Method and the Accrual Method. The cash method shows only the actual receipt of cash (income), and the actual expenditures of cash (expenses). The accrual method reflects business transactions which took place during the reporting period whether or not any money, as such, changed hands. These two methods can convey totally different pictures of profit.

The cash method is usually not a reliable picture of income and expenses for the period covered by the P and L. The reason is that credit business comprises over 90% of all commercial transactions. Thus, a P and L reflecting only cash transactions will not account for much of the business applicable to the period. The accrual method, however, can account for all activities, cash or credit, completed during the period.

• **Sales.** Some accounting procedures do not go to the extent of determining net sales (generally the gross sales less returns and allowances). Try to make sure, therefore, that "sales" figures reflect the actual, final sales which took place in the period covered by the P and L.

• **Cost of Goods Sold and Inventory Valuation.** Cost of goods sold, the next item after Net Sales on the P and L, is determined by subtracting the inventory at the end of the period from the total obtained by adding the inventory at the begining of the period to purchases made during the period. (Note: Beginning inventory and purchases are often referred to as "merchandise available for sale.") Sometimes this method of inventory valuation can be the cause of significant distortion in the profit picture. If, for instance, the closing inventory were valued high, the cost of goods sold would be lower and profits would be higher. Thus, it is easy to distort the cost-of-goods-sold figure by any change in the method of inventory valuation, or by failure to observe sound valuation methods.

Each manager should review his own inventory procedures to determine, first, what basis is used, and second, if this basis reflects the most realistic value of the stock on hand.

• **Depreciation.** One of the most critical areas in the over or understatement of profits is that of depreciation. Here is a specific area wherein you can be misled by what appears to be a sound and accurate accounting procedure. For one thing, the depreciation account can show a record of depreciation down to the exact penny. These entries in this account give the impression of absolute accuracy. Because of this you can easily lose sight of the fact that the human judgment which established the original depreciation rate could have been in error—sometimes in gross error.

By way of illustration, the decision to depreciate some store fixtures over a period of 10 years by one company proved to be unrealistic since it was found that these items had actually reached the limits of their usefulness and needed to be replaced at the end of 6½ years. Hence for 6½ years the owners of that company had been kidding themselves about the amount of their profit.

You should carefully review depreciation policies in terms of your past experience, good judgment, and the experiences of the trade. The tax rules of the Internal Revenue Service inform you of legal limitations and serve as a basis for the determination of a realistic depreciation policy. They can be a useful guide. However, in new situations it is often desirable to work out depreciation schedules through detailed discussions with Internal Revenue authorities as to what is reasonable.

In addition to making certain that your depreciation policies are realistic, you also should determine whether all depreciable items are included in your depreciation schedules.

• **Failure to Prorate Annual and Quarterly Expenses Each Month.** Companies kid themselves about their monthly profits when they do not take into account charges and expenses which arise only annually. In many smaller businesses these items are not considered until they arise at the end of the year, often to the disillusionment of the manager. Such omissions are particularly noticeable in job estimations and pricing in job-shop operations. The manager thinks he is figuring jobs on the basis of a good profit but finds that his total operating expenses should have included a number of items he actually failed to consider in the day-to-day job estimations.

Some examples of these expenses are:

(1) Income taxes
(2) Insurance premiums
(3) Rent (if paid quarterly or annually)

(Continued on page 11)

"Ya' sure this conveyor is s'posed to work like this?"

Summary

Net profit is probably the most important indicator of the success of a business operation. Hence you should be concerned about the reliability of that figure. You can be surer of its accuracy by understanding the principal ways in which profits can be erroneously stated. Basically, there are four areas in which you can kid yourself about your profits.

1. THE EXISTENCE OF A PROFIT. Key question: Are such items as depreciation and inventory handled realistically in the accounting system?

2. THE SUFFICIENCY OF THE PROFIT. Key question: Although you may be making a profit, can it be considered sufficient for your size and type of operation?

3. THE PROFIT MIX. Key question: Although you may be showing a good profit from your total operation, are there lines or departments in the company which are actually losing money?

4. THE PROFIT TREND. Key question: Does the trend of profit show healthy progress, or is the tendency towards less and less profit?

To judge your own position in these areas, get appropriate help and guidance from your accountant or auditor. If your present information is not adequate for such an analysis, you should develop suitable records as soon as you can. The accompanying article is reprinted from a publication of the Small Business Administration.

SHOP TALK

OVER THE COUNTER

By Emmet J. Hoffman
Croplife Marketing Editor

Suppose that someone would ask you for some detailed facts about your best customer? Could you reach into your file, pull out an information card which contains a brief, factual record about that customer? Or would you be forced to think a little and then give an offhand appraisal from memory.

Many dealers, such as appliance store operators, have detailed record sheets on each customer which they can study and from them determine what that customer might need in the future. Farm supply dealers can find good use for such a file system.

Major pieces of equipment and supplies sold to a customer can be recorded on the file cards and referred to regularly to determine if the buyer is a prospect for a replacement sale. Does this customer have adequate applicating equipment and what allied merchandise might he need? Often the card file can determine these needs.

Does the equipment the customer bought in the past need replacing now? Will some of it need replacing in one year, or two? Valuable sales ammunition can be provided from such a file.

The file cards can be a handy assist for the outside salesman. By using these cards, or carrying them on his route, he can refer to them to see what items the customer has purchased in the past. He can discuss the use of these products intelligently with the farmer or rancher because he knows the complete transaction.

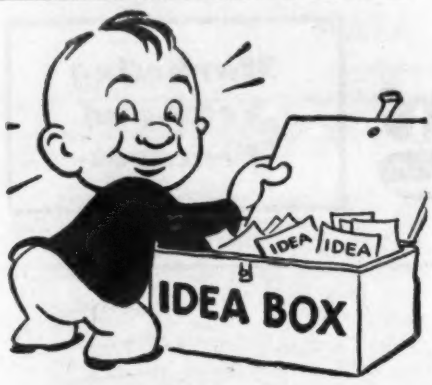
How can a dealer get information for his records? Much of it can come in conversations with the customer when he comes to the store or during farm visits. Notes can be jotted down after the on-the-route salesman has left the farm. Route men can carry little memo pads in their pockets and jot down the findings. The information can be typed on individual customer cards later.

Fertilizer deliveries can be thus recorded. The dealer will know just what fertilizer and how much has been sold to the farmer in the past. If the farmer telephones a repeat of an order of three weeks previously, the dealer knows what the order is. He is not caught off guard. Sometimes the farmer forgets what he ordered, but the dealer doesn't because he has a special file for orders.

"It isn't much work to keep this file up to date, and it is a wonderful business builder," one dealer states. "Farmers feel confident that we have an accurate record of their purchases and we do. It shows them we are on our toes."

The wise dealer can also use the individual customer record as a credit

(Continued on page 12)



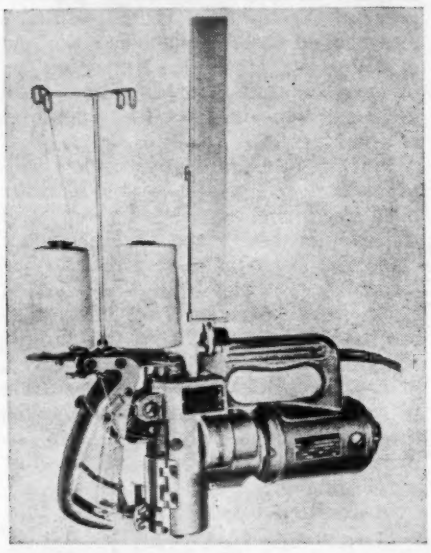
What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 5817—Electric Sewing Machine

The Burrows Equipment Co. has announced details of the Union special portable electric sewing machine for which it has been named distributor. The class 2,100 lightweight bag closing machine weighs 9½ lb. and may be mounted on a pedestal or suspended and is operated by a handle switch or foot pedal control. Cotton, burlap, jute, multiwall and tar laminated paper may be utilized. It operates at 1,200 to 1,700 stitches per minute and uses a two-thread stitch. For details check No. 5817 on the coupon and mail it to this publication.

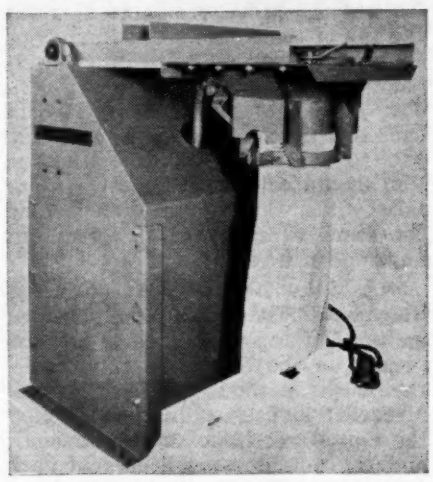


No. 6635—Pneumatic Pump

A pump, trade named Pneuma Pump, for chemicals, oil and water, has been announced by Pneuma Pump of America, Ltd. The unit consists of a compressor, motor and a distributor mounted on a base and is connected to the pump body by metal, rubber or plastic piping to the distributor. The unit is said to be able to pump sludges, liquids carrying solids or corrosive or abrasive material and fluid carrying gases, and is adaptable to chemical plant use. Secure details by checking No. 6635 on the coupon and mailing it to Croplife.

No. 5818—Bag Packer

A bag packer—which bounces as it packs—is claimed to reduce labor and handling time while speeding up operations to 12 100-lb. bags a minute, announces the Richardson Scale Co. The G-73 impacker is used for packing burlap, cotton and jute bags. It gets its name from its vertical jouncing action, which jounces or impacts material into a bag held in place by clamps. The unit operates without noise or vibration to provide smaller, more compact, packages, according to company officials. Materials which can be packed include meals, mashes, hulls, beet pulps, molasses feeds and many others. For more complete details check No. 5818 on the coupon and mail it to this publication.



No. 5737—Grain Sanitation

A free grain sanitation service is described by the Douglas Chemical Co. in a new 14-page catalog. The catalog lists and describes the firm's line of products and also describes the service, which consists essentially of four parts: (1) inspection, (2) detection, (3) evaluation and report, and (4) recommendation. A copy of the catalog will be sent without charge. Check No. 5737 on the coupon and mail it to this publication.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 6628—Pesticide Carrier

Zeolex 7A, the newest of the Zeolex products manufactured by the J. M. Huber Corp., is in commercial use as a pesticide carried for concentrates and wettable powders. Advantages claimed are reduced production costs, cleaner-running mills, with fewer shut-downs and finer grinds. The company's announcement continues: "Zeolex 7A also provides quality improvement: Wettable powders such as DDT for WHO and GSA specifications yield higher suspensions and higher re-suspensions after tropical storage. Surfactant levels can be minimized for additional economy, and the efficiency of the product allows use of substantial amounts of low-cost diluents such as kaolin clays." The product is a neutral material, chemically a hydrated silica and is virtually non-abrasive. The average particle diameter is 0.02 micron. The product is packed in 50-lb. multi-wall moisture-barrier valve bags and is available in carload and truckload quantities. Literature about the product may be secured by checking No. 6628 on the coupon and mailing it to Croplife.

No. 5799—Marketing Letters, Numbers

A new line of self-adhering numbers, letters and signs designed for marking off sections and bins in warehouses and other storage tanks for inspections and for positive identification of areas, overhead hoists and material handling equipment has been announced by the Westline Products division of the Western Lithograph Co. Numbers and letters are available in many size ranges and bold color combinations may be applied in seconds by simple pressure for permanent identification, company officials said. Samples and a catalog may be secured by checking No. 5799 on the coupon and mailing it to this publication.

No. 6634—Spray Hose

The Boston Woven Hose & Rubber Co., division of American Biltrite Rubber Co., Inc., has introduced a new line of Boston spray hose which includes hose for high, medium and low pressure service. The high and medium pressure hose is claimed to be able to handle all types of spray solutions, while the low pressure hose will handle all types of weed killing solutions and insecticides. The spray hose is claimed to be tough, weather resistant and able to meet rugged requirements. Descriptive literature, including all specifications, is available free. Check No. 6634 on the coupon and mail it to Croplife.

No. 6633—Seed Treatment

The Rainbow Color & Chemical Co. has announced a product which is claimed to improve the heat resistance of plants. The chemical treatment, said to be economical and easy to handle, "shows a substantial increase in the resistance of the plants to high temperature exposure. It is also capable of improving resistance to salinity." Soils of a saline type, located in hot summer climates under adequate irrigation, can be used as good crop land with this method, it is claimed. Secure details by checking No. 6633 on the coupon and mailing it to Croplife.

No. 5797—Farm Canvassing Booklet

Don Ross, field merchandising manager for Successful Farming mazagine, has written a booklet, "The Do's and Don't's of Farm Canvassing," which provides hints on the art of selling successfully to the productive farm market. A copy is available without charge. Check No. 5797 on the coupon and mail it to this publication.

No. 6627—Film

A 20-minute, 16 mm. sound movie has been produced by the Terra-Lite Division of Zonolite Co. for showing to firms marketing agricultural chemicals. Titled, "Vermiculite, Carrier for Agricultural Chemicals," the film details properties of vermiculite as a carrier for insecticides, pesticides, and weed killers. Production of vermiculite at company mines in South Carolina and Montana, and ag-chemical mixing techniques of the lightweight mineral are shown. Information about free showings may be secured by checking No. 6627 on the coupon and mailing it to Croplife.

No. 6632—Irrigation Timer

A newly designed irrigation timer recommended for farms, lawns or cultivated areas where sprinkling of one section at a time is required has

Send me information on the items marked:

- ☐ No. 5737—Sanitation
- ☐ No. 5797—Farm Canvassing
- ☐ No. 5799—Marketing Letters
- ☐ No. 5817—Sewing Machine
- ☐ No. 5818—Bag Packer
- ☐ No. 6626—Hydrocarbon
- ☐ No. 6627—Film
- ☐ No. 6628—Carrier
- ☐ No. 6629—Range Fertilization
- ☐ No. 6630—Water Soluble Film
- ☐ No. 6631—Fertilizer Tanks
- ☐ No. 6632—Irrigation Timer
- ☐ No. 6633—Seed Treatment
- ☐ No. 6634—Spray Hose
- ☐ No. 6635—Pneumatic Pump

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS PERMIT No. 2
(Sec. 34.9, P. L. & R.)
MINNEAPOLIS, MINN.

BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Croplife

P. O. Box 67

Reader Service Dept. Minneapolis 1, Minn.

been developed by the Zenith Electric Co. It is known as the model IRR, and the timer controls a number of sections in sequence. The length of time per section is factory adjusted but can be set to allow different times for each section. Twenty-four hour control is provided, and the timer can be cut out automatically any day of the week. To secure details check No. 6632 on the coupon and mail it to Croplife.

No. 6626—Hydrocarbon Booklet

A new, illustrated, 20-page booklet which describes the properties and uses of five important chlorinated hydrocarbons has been published by the Stauffer Chemical Co. The publication contains complete technical data, e.g., typical analyses, solubilities, flash point and density tables and graphs, as well as other pertinent physical and chemical information, for perchlorethylene, trichlorethylene, carbon tetrachloride, methylene chloride and chloroform. One full section of the booklet sets forth optimum handling procedures and methods of minimizing waste. Check No. 6626 on the coupon and mail it to secure a copy without charge.

No. 6630—Water Soluble Film

A new water soluble, transparent packaging material said to be suitable for fertilizers, insecticides and other water dispersible products has been developed by the Reynolds Metals Co. Called "Reynolon" by the company, the new material is a polyvinyl alcohol, water soluble film. It is claimed to provide product protection during shipping and storage and will protect workers against harmful products. High speed bag forming and heat sealing equipment for the film is available, according to Reynolds officials. Secure details by checking No. 6630 on the coupon and mailing it to Croplife.

No. 6631—Fertilizer Tanks

A brochure and price list for standard sized aluminum fertilizer tanks made by the Broyhill Co. are being offered. The brochure lists specifications for its line of Tori-Tanks and outlines construction and welding details. Various capacity tanks, ranging from 85 to 1,000 gal., are manufactured by the company. The tanks are designed for storing, transporting and applying liquid fertilizers. The company also manufactures both horizontal and vertical steel tanks and rubber lined tanks. Secure the literature by checking No. 6631 on the coupon and sending it to Croplife.

No. 6629—Range Fertilization Booklet

A new booklet, "Range Fertilization," has been published by the California Fertilizer Assn. It contains information for livestock operators and can be secured from western fertilizer suppliers or through Croplife. Contents include sections on earlier grazing possibilities, increased palatability, more feed from the same acres, cutting labor costs, improved forage quality, making irrigation pay, fertilizer carry-over, and how much, when and which to fertilize. Check No. 6629 on the coupon and mail it to Croplife to secure a copy of the booklet.

RUTGERS APPOINTMENT

NEW BRUNSWICK, N.J. — Dr. George W. Luke has been named acting chairman of the agricultural economics department of Rutgers University, according to Dr. William H. Martin, dean of agriculture. Dr. Luke succeeds Prof. Allen G. Waller, who is retiring after 41 years of service to the university.

KIDDING ABOUT YOUR PROFITS?

(Continued from page 9)

• **Maintenance and Upkeep Expenses.** Another expense allied to the annual and quarterly expenses discussed above is that for facilities and equipment maintenance. The monthly P and L statement may fail to carry an allowance for this expense for some months. In that case the profits for those months will have to be readjusted when large repair bills fall due. Sometimes these bills can be large enough to wipe out profits for several months.

• **Low Salary for the Owner-Manager.** Many small businesses which appear to be making a fairly good profit would find a changed situation if they allowed a comfortable salary for the owner-operator. Often the proprietor draws money out of the business on an irregular basis, as he needs it. Many times this does not amount to reasonable compensation when compared with the pay of other similar managers working on a regular salary basis.

For example, total withdrawals for a year by one owner-operator amounted to $8,000, but the going pay for comparable work was actually $15,000 a year. Consequently $7,000 of the profit figure was the result of the fact that the owner was underpaid by that amount. If he had had to withdraw from the business and hire someone to perform his job, he would have had to pay at least $15,000.

Often a manager will not recognize that fact until he approaches his bank for a loan. In examining the company's financial statements, the banker will recognize that the profit figure is not so much a result of profitable business operation as it is of working for an unrealistic salary. Of course, when thus done intelligently and deliberately, as a means of building up capital funds in a new enterprise, most bankers would not criticize.

• **Lack of Sufficient Insurance Coverage.** The profit figure can also contain amounts which are brought about as the result of unjustifiable risk-taking by the business. Serious fires or other accidents, if not covered by adequate insurance protection, can cause a drain on resources that may wipe out much or all of the profits for the past year or so. When a company has been carrying insufficient insurance coverage to guard against such disastrous experiences, somewhat more profit will be shown from month to month. In such cases the profit figure can be said to be a combination of the results of profitable operation, plus false savings brought about by undue risk taking. Just how much protection is "adequate" is, of course, a matter of judgment. For advice on this point consult your insurance agent, broker, or company representative, and your accountant or banker.

• **Minimum Wage Laws.** With the current emphasis on compliance with the minimum wage law it is increasingly important for you to clarify the status of your company in this connection. Therefore, make sure you are not kidding yourself with inflated profits resulting from paying your employees a lower rate than is required.

THE SUFFICIENCY OF THE PROFIT: Although you may have determined that you actually have a profit, you may be kidding yourself as to the sufficiency of that profit. You may fancy yourself as a fairly efficient operator since you are showing what you consider a very respectable total dollar profit. However, you may actually be operating below par as compared to others performing the same or similar types of marketing operations. The point on which you may be kidding yourself is judging your profits against too low a standard. This will naturally make them look good.

In order to get a reliable perspective in this regard, you must reexamine your standard and establish a sound basis for comparison. If you establish a standard that represents real accomplishments, your comparisons will be valid.

A good procedure in this connection is to gather some statistics on the trade you are in as well as data on some of the most successful companies in that trade. Trade associations and publications are helpful sources of this information. One well-prepared set of figures is "The 14 Important Ratios" of Roy A. Foulke. These are published by Dun & Bradstreet, Inc., 99 Church Street, New York 8, N.Y., in a small volume revised each year. In addition to showing "Net Profits on Net Sales" for a number of businesses, this publication shows 13 other bases for measuring operations. Another good source is the continuing series of Business Service Bulletins, published by the U.S. Department of Commerce, on operating ratios for selected lines of business.

THE PROFIT MIX: Although you find that you are making a real profit and that your profit is sufficient as compared to a good cross section of other similar concerns, there is another area in which you may be kidding yourself. It is in assuming that the total profit figure depicts the true situation for all the various lines or services of the company. Upon careful examination you may find that some activities are doing exceedingly well and even carrying other losing activities.

If your company is engaged in selling a number of products, providing a number of services, or engaged in a combination of these activities, you should develop a system for constantly determining the actual contribution of each of these goods, services or activities to the total profit. There are, of course, cases where you may have to continue to handle certain losing items because they must be provided to complete your line of merchandise or service. If possible it is desirable to avoid this situation. But regardless of whether you can avoid them or not, you certainly should know specifically what activities are losing, how much they are losing, and why they are losing.

This information can be determined by a careful breakdown of income and expenses by individual line. The objective of this kind of "costing" is to allocate to each activity the costs required to carry it on. Typically, the costs will fall into three main categories:

(1) Wages
(2) Merchandise
(3) Overhead

Systems of costing need not be elaborate nor complicated, nor is it always necessary to carry on the procedures constantly. Periodic checks will often suffice.

THE TREND OF PROFIT: You may be satisfied with your analysis of the existence of a profit, the sufficiency of the profit, and the profit mix, and even then kid yourself in still another area. That is in the trend of your profit. The examination of your profit picture at any one point in time, such as a monthly or a yearly P and L statement might prove satisfactory. But when viewed in relation to a number of months or years it might instead show an unsatisfactory trend.

This comparative analysis might reveal such things as an increase in volume, but a decrease in the ratio of net profit to sales. Or expenses might be increasing at a faster rate than sales or net profit. Comparisons of this sort usually become more meaningful when all items are reduced to a percentage basis. Typically, all items are expressed as a percentage of net sales.

Many small marketers find return on investment to be a useful yardstick for measuring the trend of their profits. It is not difficult to develop and apply. Essentially it tells you two things: How well your firm did in one reporting period in contrast with others, and how much the money invested in your business earns in comparison with other investment alternatives.

For example, suppose you had a small service business in which capital of $38,000 had been invested. And suppose you felt that, all things considered, the yield on that capital should be about 9% a year before taxes. This would total $3,420.

That figure might work out to, say, 3% of annual net sales of $114 000. Therefore, to keep track during the year of how things were going—the trend, in other words—you might keep score, on a quarterly basis, of sales and profits. Any quarter ending with sales of less than $28,500 and profits below $755 would indicate that things were moving in the wrong direction.

Knowing that, you could try either to increase sales volume to produce more profit dollars, or to obtain better margins on existing volume. If neither was possible, you might want to consider reinvesting your capital in a more profitable way.

ANALYZE YOUR OWN OPERATION: The considerations discussed above are not intended to be all inclusive. Other factors may also be worth analyzying to determine their influence on the accuracy of the profit figure. Using this aid as a guide, each manager should endeavor to develop his own checklist of potential trouble spots in his particular business. This checklist should certainly be discussed with your accountant so he will understand your purpose in questioning these areas. Frequently, he will be able to offer valuable suggestions.

FOR FURTHER INFORMATION: Readers wishing to explore further the subject of statements and analyses of profitability may refer to the following publications. Consistent with the objectives of these Aids, this listing is intended only as a starting point. It should not be considered as an all-inclusive index. No slight is intended towards authors whose works are not mentioned.

(1) Profit Management, by F. V. Gardner et al. McGraw-Hill Book Company, Inc., 330 West 42nd Street, New York 36, N.Y. 1955. $6.

(2) Practical Distribution Cost Analysis, by D. R. Longman and Michael Schiff. Richard D. Irwin, Inc., 1818 Ridge Road, Homewood, Ill. 1955. $7.80.

(3) Financial Statements: Form, Analysis, and Interpretation, by R. D. Kennedy and S. Y. McMullen, Richard D. Irwin, Inc., 1818 Ridge Road, Homewood, Ill. 1952. $7.80.

(4) Fundamentals of Accounting, by H. W. Wade. John Wiley and Sons, Inc., 440 Fourth Avenue, New York 16, N.Y. 1951. $4.75.

(5) What the Figures Mean, by Stephan Gilman. The Ronald Press Company, 15 East 26th Street, New York 10, N.Y. 1944. $3.

Kentucky Sales Gain in 1956-57

LEXINGTON, KY.—Kentucky fertilizer sales moved upwards in the fiscal year ended last June 30, according to the State Department of Feed and Fertilizer.

The 1956-57 sales of 541,367 tons represented a gain over sales of 529,600 tons in the previous fiscal year.

Sales of both mixed goods and materials showed increases. Mixed goods stepped up to 442,118 tons from 432,278 tons, and materials moved to 99,249 tons from 97,322 tons.

Sales of leading grades in 1956-57, with 1955-56 tonnages in parentheses, were 4-12-8, 100,387 tons (84,951); 5-10-15, 96,373 (84,569); 3-12-12, 39,831 (50,449); 10-10-10, 30,860 (22,766); 6-8-6, 25,580 (30,833); and 6-12-12, 25,388 (17,753).

Doing Business With

Oscar & Pat

By AL P. NELSON
Croplife Special Writer

A tall, thin farmer with big brown eyes came ambling into the Schoenfeld & McGillicuddy store and approached the wooden railing which separated the office from the salesroom. It was Hugo Anderson and he was coughing badly.

"Oscar," he said, "I need some stuff to kill poison ivy. The darn stuff has spread out behind the barn and the cows get into it before milking. Then when we come and milk them and we touch the cows' legs, we get it. My hired man has it all over his hands."

Oscar frowned as he always did when he had to get up and sell, and thus disturb his trend of thoughts on his books, especially the discounts. But Pat was out selling somewhere and Tillie Mason, the ulcerish bookkeeper had gone to the bank, and so Oscar was it.

Hugo Anderson followed Oscar to the island where the balding rotund fellow got a can of poison ivy spray.

"Oscar," he said, "I think my wife Hannah is tighter than you are."

Oscar looked hostile. "What's the matter with being tight?"

Hugo grinned. "Nothing, I guess, if you like to live that way. Remember, a feller ain't never gonna get a return ticket on what he missed along the way. Now you take my wife—she's got a stinking old oil stove she uses in the cook shanty every summer and the darn smell makes me cough. Think she'll buy a new one? Not her. She says in summer we can always keep the porch windows open and I shouldn't let a little kerosene smell bother me."

"Too many people throw things away before they need to," Oscar said, ringing up the sale. "That's what's wrong with this country."

"My kids and I gave her a Mother's Day present two years ago of $17.50 cash," said Hugo, "and we asked her to buy a new oil stove. But she didn't. Put the money in the bank. She said it would draw interest for us."

"She is a wise woman, Hugo," said Oscar approvingly. "I did not think they made many of them anymore like that."

Hugo Anderson coughed some more, then sighed. "Well, this spring the old stove smoked so bad, Mother said I could see the second hand dealer and ask him if he had one we could get in trade, but he hasn't showed up with anything yet. I don't know how much longer I can stand it. Maybe I'll have to eat my meals sitting on the back steps. At least I'll get lots of fresh air with my food."

"Ach, you should not make fun of your wife because she wants to get along with second hand things," Oscar remonstrated. "You are lucky to have a saving woman like that. Too many American women waste money. Look at the shoes they waste. Some have 20 to 30 pairs they tell me in a closet. And they laugh at you if you ask them to have a pair soled. Yah, if more people would get along with some second hand stuff once in a while, they would be able to pay their debts and have money in the bank."

While Oscar had been talking, Hugo Anderson watched him closely. Now, there was a suspicious expression on the farmer's face. "Say," he said slowly, "if you like second hand stuff so much, how do I know that this poison ivy killer isn't second hand? And maybe all the fertilizer I bought from you fellows is second hand, too."

Oscar was insulted. "Ach, it is not so. How could poison ivy killer be second hand? Who could use it and put it back in the can? And who could use fertilizer and put it back in the sack?"

"Wal, I dunno," said Hugo, "they are doin' some mighty foxy things nowadays with machines and x-rays and everythin'. I wouldn't have thought about it, but you're so nuts on this second hand stuff. Maybe you go around buying old fertilizer and farm chemical stock from bankrupt stores in another state. Stuff that's been layin' some place else for two or five years. I've read about such things."

Oscar's face was now a brilliant red. His lips moved back and forth in rage. And the fact that Pat McGillicuddy had come in and hung up his straw hat and was listening, didn't help any, either.

"We do not sell second hand stuff!" he yelled. "This is all goot stuff we have here."

"There's something screwy," replied Hugo. "You advocate a farmer buying and using second hand kerosene stoves and stuff like that and yet you claim you got nothin' second hand here in fertilizer or farm chemicals. It don't jibe, Oscar. It sounds pretty fishy."

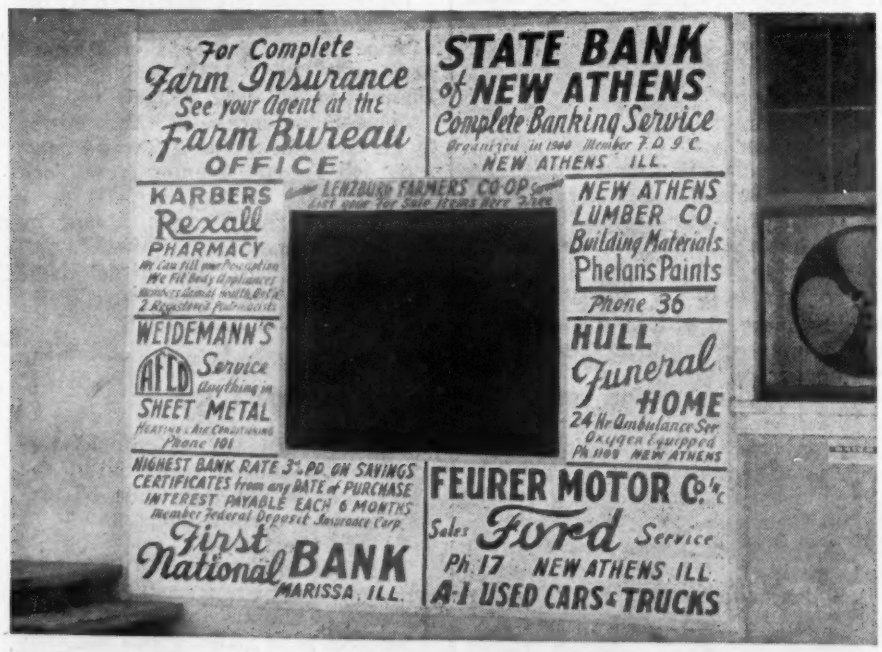
"What Oscar means, Hugo," said Pat with a smile, "is that while we would never dare sell anything second hand to a customer as a new product, in our own personal lives, we might buy some second hand stuff just to save a little money."

Hugo grinned. "Yeah, I bought a second hand suit from a pawn shop once for $8. It was all I had. Then when I got home I found the suit had peg top pants. It was dandy cloth but about 30 years old."

Pat and Hugo laughed at that but Oscar's face was as impassive as the Sphinx, and his eyes were mirrored with frost.

"That's it," Pat said. "There are a lot of things a fellow has to live with in this life. He doesn't like it, but he has to do it once in a while. But believe me, we certainly go all out to please customers even if it means hardship for us. By the way, Hugo, how'd you like to have me come out to your place and talk with you about fall fertilization." And he launched into a discussion of the project.

Later, Hugo left with an invitation to Pat to come out the following afternoon. As he passed Oscar's desk, he said in a low voice, "Go easy on that second hand stuff, Oscar. Monkey sees, monkey does, you know. You'll never coax dollars out of our pockets that way."



SIGN WORKS 3 WAYS—The Lenzburg Farmers Co-op Grain Co., New Athens, Ill., erected this cooperative sign on the office wall of its farm store as a service gesture, according to William Skaer, manager of the concern. The local businessmen were given space on the sign because they underwrote its cost. The company gives farmers free classified ads on its blackboard as a service to its customers. The customers like it for this reason, and their reaction is better relations and more patronage, says Mr. Skaer. Each Monday the blackboard is brought up to date. Mr. Skaer says the idea can be used by any firm that cater almost exclusively to farmers. Installation of the sign is inexpensive and can be executed by a local sign painter in short order.

OVER THE COUNTER

(Continued from page 9)

indicator. For example, he can write at the bottom of the card how the customer has paid his bills during the last few years. He can write "S" for "slow pay," and "P" for "prompt." "X" can indicate each time the dealer had to make a personal call to collect. These symbols show at a glance how each customer pays his bills. The dealer will want to try to follow-up for "extra sales" those customers who are rated "P" and he will concentrate on those leads first. He will not be so anxious to try to sell extra merchandise to those who are rated "S" or who have "X's" on their purchase cards.

Once a dealer gets a system like this started, he can add to it month after month. If he uses both sides of the card, he will be able to utilize the findings for one to three years, depending upon the information put upon it. Most certainly it is worthwhile to any dealer to be able to see at a glance the purchasing and paying habits of individual customers over such a long period.

The cards can be studied quite often, too, to spot seasonal leads for quick, additional sales. At sales training sessions with employees, too, the dealer can go over a few of these customer records at each meeting, and have the employees help determine what extra sales can be made to each and when, and whether any sales opportunities with any of these customers have been missed.

Drouth Over, But New England Still Adding the Damage

BOSTON — While the drouth in southeastern New England is officially at an end, its effects will take some time to determine thoroughly, according to reports from the three states directly involved, Massachusetts, Rhode Island and Connecticut. Parts of New Hampshire were also affected by the summer long drouth.

Massachusetts spent $22,000 for rain making men and equipment in August, but there was a question of whether it was nature or artificial rain making that brought downfalls in certain areas during the drouth period.

The state's contract was with Dr. Wallace Howell of Lexington, Mass., nationally known rain maker, who said it was impossible to tell whether the artificial efforts had induced rain. Some farmers swore by them, others at them, he said.

In Connecticut, Gov. Abraham A. Ribicoff was informed that dairy farmers were the chief sufferers from the summer long drouth. Their losses in forage and silage crops were fixed at $7,926,480 by a survey made by the University of Connecticut's College of Agriculture. Potato farmers lost about $500,000 and tobacco farmers a similar amount.

Gov. Ribicoff ordered the survey to obtain basic drouth information for the guidance of a special session of the legislature called for late September to consider farm drouth relief.

New England News Notes

By GUY LIVINGSTON
Croplife Special Correspondent

County agricultural agents will meet in Boston for their 42nd annual convention at Sheraton Plaza Hotel Oct. 13. The hotel will serve as headquarters for an expected 1,200 agents and their families. Members of the executive committee arranging the program include: Charles W. Turner, chairman, Worcester County agent-manager; Joseph T. Brown, Middlesex County agent-manager; Horace C. Ballard, Laconia, New Hampshire county agent; Herbert W. Peabody, Newport, Rhode Island county agent; and Walter Melnick, Hampshire County agent-manager.

Speakers will include Ezra Taft Benson, secretary of agriculture, and Sen. John F. Kennedy (D., Mass.) O. Lewis Wyman, Greenfield, is president of the association.

Dutch Elm Disease

The fight against Dutch Elm disease continues in Massachusetts. In Southboro, Mass., lack of money and diseased trees by state roads and on Metropolitan District Commission land are the biggest problems in the fight, William H. Onthank, moth superintendent, said.

A total of 102 diseased trees needs to be cut down on town land alone, he said. In the past 18 months, 147 elms have been removed at an average cost of $75 a tree. In addition a large number of dead and dying elms are on Department of Public Works road property and in the MDC reservoir territory, he said.

Appointment

Charles H. McNamara, Massachusetts state agricultural commissioner, has announced the appointment of Edward M. Dwyer of Weymouth as director of the Division of Livestock Disease Control. He replaces Victor M. Cluff of Tewksbury in the job.

FARM SERVICE DATA

Extension Station Reports

Fertilizer practices for the major ocessing crops grown in New York te have undergone profound anges during the past 25 years, ac- rding to Prof. Charles B. Sayre, ad of the vegetable crops depart- nt of Cornell's Experiment Station Geneva.

"After rich, virgin soil has been rmed for a number of years, the tility level becomes depleted, with osphorus showing depletion first, llowed by nitrogen and then po- sh," he states. "Over the past 25 ars this pattern of fertilizer needs s occurred in growing vegetables processing in western New York."

In fertilizer experiments at the sta- n 25 years ago the greatest yield creases in all processing vegetables re obtained from complete ferti- ers especially high in phosphorus, of. Sayre said. At that time very w analyses fertilizers were most mmon and only about 300 lb. per re was normally applied.

"Our experiments emphasized the nadequacy of such treatments and howed the benefit of higher analy- is fertilizers and heavier applica- ions. The 4-16-4 formula met this equirement and proved especially ffective for tomatoes, peas, sweet orn, cabbage and snap beans, with 5-10-10 for beets supplemented with salt and borax in recent years or this crop.

"Growers have been using increas- g amounts of fertilizer and progres- vely higher analyses mixtures. Al- ough the analysis has nearly dou- ed on the average in recent years, t growers have not reduced the rate application in proportion. As a re- lt, the phosphorus-fixing capacity of any soils has been satisfied and they w have a good supply of available osphorus. Our present experiments, herefore, are attempting to deter- ine the accumulation of available osphorus and potash in these heavi- fertilized soils to guide growers in eir fertilizer practices. These ex- eriments show the need for less osphorus and for more nitrogen, nsequently we are now recommend- g a 10-10-10 mixture for many pro- essing crops."

★

Anthracnose, the serious tomato isease, has been found this season Dr. Donald F. Crossan, University Delaware plant pathologist. Dr. rossan said that the disease has in- aded several tomato fields in the tate that have been irrigated all sea- on.

He recommended that fields where he disease was found this season not e planted to tomatoes next year. If omato planting is necessary in these elds, Dr. Crossan advised using pro- ective fungicides at the beginning of he first fruit set next season.

★

The Rutgers University department plant physiology is conducting stu- es to determine the extent to which ibberellic acid can overcome or com- ensate for the long day require- ents of certain flowering plants.

Preliminary results, which are ery promising suggest that Gib- berellin may enable one to regulate he time of flowering of certain lowering plants and by inducing lowering in other plants, such as egetables, become an invaluable ool for the plant breeder.

The department is also studying the ffect of Gibberellin in overcoming e inhibition in elongation of plants caused by boron and other deficien- cies, the relation of Gibberellin to ni- trogen nutrition in plants and the methods of assaying gibberellic activ- ity in its various formulations and in plants.

Researchers in the horticulture de- partment have initiated studies to evaluate the place of Gibberellin in the production of fruits, vegetables, flowers and ornamental specialties. The advantage of obtaining somewhat earlier fruit set with vegetables such as tomatoes would be tremendous, the researchers say. This also applies to strawberry production and studies are currently under way using both crops. Greenhouse and some field studies are also under way to determine the ef- fects of Gibberellin on the rooting response of soft wood and hard wood stem cuttings of ornamental plants and on seed germination and seedling and lateral bud growth of deciduous shrubs.

The farm crops department is also conducting limited studies to deter- mine the effect of Gibberellin on germination and seedling growth of grains, grasses, legumes, and the susceptibility of weeds to herbicides.

While these studies by researchers in the several departments concerned with plant production are very pro- mising, departments are not yet ready to make general recommendations for the use of these new plant regulators in commercial plant production.

★

September and early October are a good time to seed and fertilize rye to give cattle quick, low cost feed this fall and next spring. Dairy specialists report that savings in winter feed costs can run as high as 10 to 15% when rye is included in the pasture program.

Rye will give dependable fall graz- ing in most years, according to agron- omists, and it will almost always fur- nish early spring pasture.

The Middle West Soil Improvement Committee says it will pay to add a high nitrogen fertilizer when rye is seeded after corn, wheat or oats crops. This is particularly true if straw is turned under. Otherwise soil organisms will compete with the crop for the nutrient supplies.

Ohio Pesticide Institute to Meet

COLUMBUS, OHIO — The winter meeting of the Ohio Pesticide Insti- tute will be held at the Neil House here Nov. 20-21, according to J. D. Wilson, Ohio Agricultural Experi- ment Station, Wooster, secretary.

Now! More Technical Field Service from Du Pont

JOHN SPICER, JR., technical specialist for the southeastern states, with headquar- ters in Goldsboro, N. C.

OVE. F. JENSEN will serve manufacturers in the midwestern states, with headquar- ters in Maple City, Michigan.

PHIL B. TURNER will provide technical counsel for plants in the Northeast, and will work from Wilmington, Del.

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BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

What's Been Happening?

This column, a review of news reported in Croplife in recent weeks, is designed to keep retail dealers on the regional circulation plan up to date on industry happenings.

Jack V. Vernon, president of the Niagara Chemical Division of the Food Machinery & Chemical Corp., Middleport, N.Y., was elected president of the National Agricultural Chemicals Assn. at its annual convention at Spring Lake, N.J. He succeeds Fred W. Hatch, manager of the Agricultural Chemicals Division of Shell Chemical Corp., New York. The new vice president of NAC is Charles H. Sommer, Monsanto Chemical Co., St. Louis. Lea S. Hitchner continues as the executive secretary. Some 500 persons attended the meeting.

Work has started on a statistically designed chemical control research project sponsored by the National Plant Food Institute. The primary purpose is to determine whether current fertilizer sampling and analytical procedures are adequate.

Hercules Powder Co. has announced it will start construction immediately of facilities to produce 10,000 tons per year of urea at its Hercules, Cal., plant.

Total world consumption of fertilizer, excluding the USSR and Communist China, has gone up from 8.4 million metric tons of combined nitrogen, phosphoric acid and potash in 1938 to 19.6 million tons in 1956, an increase of 133%, according to the Foreign Agricultural Service.

Three new products, "Niagara 1240," a compound with miticidal properties and possessing activity against various insect species, "Phostex," an organophosphorus pesticide, and "Sevin," a wide spectrum carbamate insecticide, were described at the 132nd meeting of the American Chemical Society held in New York. During the meeting a study of anhydrous ammonia from the standpoint of its economic value was presented in a paper by Dr. Arthur M. Smith, Olin Mathieson Chemical Corp. He said that anhydrous ammonia supplied nearly one-third of all the direct application fertilizer nitrogen used in the U.S., thus putting it in first position in this regard.

Price increases were announced by basic suppliers for ammonium nitrate and anhydrous ammonia effective Oct. 1.

The U.S. Department of Agriculture said that it has proposed an amendment to regulations for labeling commercial pesticides in order to clarify its policy of not endorsing these products.

Sales of anhydrous ammonia for direct application gained 32.8% in the first seven months of this year over the sales in a comparable period in 1956, according to a survey issued by the Agricultural Ammonia Institute.

The U.S. Department of Agriculture reports the presence of a virus disease in rice in Florida which, officials said, is virus in its concept and which defies identification of method of transmission.

Weeds cause a $300 million loss to California's economy each year, an official of the California State Chamber of Commerce said at a weed control symposium.

Agricultural chemicals industry executives report expanding opportunities and attractive salary advancements for scientists with B.S., M.S., or Ph.D. degrees in the biological sciences, according to a survey of the National Agricultural Chemicals Assn. The report credits the favorable conditions for careers in the industry to the growing demand for industry products—insecticides, fungicides, herbicides and related materials.

International Minerals & Chemical Corp. reported record sales and a 29% increase in net earnings after taxes for the fiscal year ended June 30, 1957. International's annual report listed earnings for the year at $6,961,000 or $2.81 per share, compared with $5,402,000 or $2.14 per share for the previous year.

Dealers and sales personnel tend to lag behind other informational agencies in influencing farm people to accept most new agricultural products and practices, according to Dr. Joe M. Bohlen and Dr. George M. Beal, agricultural sociologists who appeared before the National Agricultural Chemicals Assn. meeting in Spring Lake, N.J.

Activation of the Great Plains Conservation Program authorized by Congress last year, was announced by the U.S. Department of Agriculture. The program involves $10 million for the first year and affects 221 counties in ten states.

The Ohio Pesticide Institute held its annual summer field tour in August, with over 100 persons in attendance. Demonstrations of application methods with a number of different pesticides were features of the tour.

International Minerals & Chemical Corp. announced plans to spend more than $20 million on construction of a potash mine near Esterhazy, Sask., Canada. A 3,000 ft. deep shaft is presently being sunk at the site.

The Buhner Fertilizer Co., Seymour, Ind., was purchased by American Agricultural Chemical Co. The latter has 30 plants and sales offices in the U.S., Canada and Cuba.

Velsicol Chemical Corp. announced that it will produce ethyl parathion at its Memphis, Tenn. plant. Production was to begin in November, 1957.

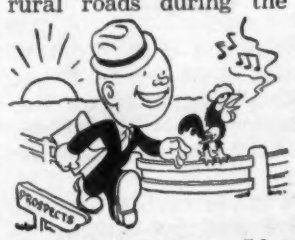
The U.S. Department of Agriculture alerted farmers of the Carolinas to be on the lookout for the presence of witchweed. Known to be present on some 38,000 acres near the coast in both states, the weed is expected to be found in additional localities even though efforts are being made to contain it.

Price policies of the Tennessee Valley Authority were the subject of questioning at hearings conducted in connection with the TVA appropriations bill. Industry witnesses declared that TVA's prices on ammonium nitrate were some $6 below that quoted by private firms, and despite TVA's saying that much of its production of fertilizer is used for "demonstration and educational purposes," actually only about 3% of it goes for that purpose.

Do's, Don't's of Farm Canvassing

By Don Ross

Through the years I have done about as much farm canvassing as the next man. From actual experience, I know what it is to ride the rural roads during the hot, dusty days of the summer and when winter's blizzards whip the open country into almost a trackless wilderness. I know all of the disadvantages and the trials of farm canvassing and I also know, from personal experience, the rewards which come to the farm canvasser who does his job intelligently and well.



Here I want to put down the "do's and don't's" of farm canvassing which I have learned from personal experience. I hope they will prove interesting to you who do business with America's biggest businessman—the farmer.

DO'S IN FARM CANVASSING:

Do compliment the farmer. Tell him he is America's biggest businessman and that he can buy any merchandise on Main St.

Compliment him on his buildings, livestock, his home, his friends and his family. He's human and he reacts to compliments just as anyone else.

Do recognize from the start that the business farmer has done pretty well financially these past 15 or so years with farm savings now totaling some $20,000,000,000.

Rate him for what he is, a man who handles large sums of money. He is accustomed to spending several hundreds of dollars at a time for seed, livestock, tractor tires, stock tanks, portable buildings, fertilizers—and spends thousands at a time when he buys more equipment, self propelled combines, diesel tractors, and so on.

Do ask questions. After all, you may not be familiar with the business of farming even though you grew up on a farm several years ago. The farmer is happy to have the opportunity of telling others about the business he loves so well.

Do use testimonials in farm canvassing and be sure they are from honest-to-goodness folks rather than from Hollywood. Testimonial letters and pictures are of great value in farm canvassing.

Do use the names of other customers you may have in the locality, especially those your prospect may know. This builds prestige for you.

Do use the name of the farmer when you call. Usually, you can get this information from the mailbox or the neighbor down the road.

Do call at the farm home when you arrive, even though you are sure the farmer is in the barn or not about. It is well to let the farm homemaker know the purpose of your call if you want her on your side.

Do suggest to your farm prospect that you should adjourn to the house if the weather is bad, particularly when the weather is cold.

Do use your business card on the very start in order that he may be reminded of your name and that there will be no misunderstanding about the purpose of your visit. It is said that about 85% of our impressions are made through the eye.

Do follow up your call by letter or even the mailing of a folder if there's the slightest opportunity. This is good business.

Do use actual farm illustrations. For instance, tell him, "Just one 200 lb. hog a year will pay the entire cost of my proposition." Talk in terms of farm dollars which mean pork, beef, corn, wheat, and the like.

AND NOW THE DON'T'S OF FARM CANVASSING:

Don't be discouraged because the roads are bad, the weather is inclement and because your prospects are not living closer together on better roads. The prize, farm business, is greater than all of these objections.

Don't dress foolishly. An auctioneer said that the auctioneer should be the best-dressed man at the auction fair. Dress like a farmer. Wear a necktie, white shirt and be neat. Dress comfortably, of course. Don't go out on farm calls "college boy" style with your head in a convertible and smoking a cigarette.

Don't smoke on farm calls. The fire hazard is too great and many farmers are afraid of fire.

Don't hesitate to call him farmer, because he is proud of that title.

Don't park your car where it might be in the way or where it will be on the lawn.

Don't try to out-talk a tractor, you can't do it. If you have a tractor for competition, try to get the prospect to shut off the motor or get off the machine or call back at a later date.

Don't try to talk to the farmer when he's busy. Obviously, he can't give you much attention or even much courtesy when he is putting up hay and threatening sky indicates a storm is due.

Don't try to be palsy-walsy until you become acquainted. If there is anybody in the world who sees through shams, it's the farmer and he doesn't like it.

Don't ever hesitate to tell your whole story. Farmers are good buyers but they want the facts.

Don't take things for granted. You may be in the insurance business or selling home equipment or anything else of that nature, but the farmer isn't accustomed to your trade terms. Explain everything to the "nth" degree. If possible, get a pencil in his hand and let him do the figuring. Don't unsell yourself on the opportunity to get farm business.

Don't take too seriously sensational stories about drouth, low market prices, drops in farm income, and all that. Such tripe has long been the trade of politicians seeking the farm vote. After all, the farmers continue to produce every day in the year and they continue to use goods and services you have available also.

Don't pass up opportunities to make farm calls. If there's a bad dog, sound your horn a few times and nine times out of ten, someone will come to the door. If you see several cars, that may be the very thing you want. It may give you an opportunity to meet several new prospects.

Don't spend endless hours hunting over the farm for your prospect. Usually, we have to make as many calls as possible. You will have to decide for yourself whether it is best to call back or start hunting over a farm to locate your prospect if he isn't already available.

My advice is to save your time and energy and call back.

EDITOR'S NOTE: The author offers in the accompanying article his suggestions on how to make the art of selling to the productive farm market more successful. Mr. Ross is associated with Successful Farming magazine, Des Moines, Iowa.

OPEN HOUSE

BELLEVILLE, KANSAS—Open house was held by Johnson Farm Supply located 4½ miles north of here Sept. 17. The firm handles poultry and livestock feeds, fertilizer, seed and other farm supplies. Duane Johnson is owner and operator of the firm.

Green Pastures Champions Follow Top Conservation and Fertility Programs

BOSTON—An outstanding dairy herd feeding program won a Maine farmer first place honors in the tenth annual New England Green Pastures contest. Vaughn E. Hurd of Thornike, who is milking 63 high producing Holstein cows, was declared the winner by a team of agricultural experts after a tour of 18 farms entered in the contest from six states.

Second place in the contest went to Benjamin L. Barringer, Brookfield, Conn. Other top placings were John L. Morrill and Son, Penacook, N.H., third; Bushey Brothers farm, operated by Randall and Linwood Bushey, Essex Junction, Vt., fourth; Burton Froberg, Lafayette, R.I., fifth; and Henry T. Whiting, Lanesboro, Mass., sixth.

Announcement of the winners was made by Harry Mitiguy, chairman of the New England Green Pastures Committee.

To reach their decision, the judging committee toured three dairy farms in each New England state, in most cases the winners of local pasture judging contests. The judges looked over each field on every farm, questioned the farmer on his forage management, inspected his records and determined the quality of his hay and silage.

Through the contest and related educational programs, the New England Green Pastures Committee attempts to increase the prosperity of the region's dairy industry through the growing and use of quality forage for pastures, hay and silage and through the economic use and management of all farm resources.

A well planned forage program, exceptionally good care for the farm's young stock, and an outstanding conservation program brought first place honors to Mr. Hurd. He owns or rents 577 acres of land, 263 of which is tillable, and operates the farm in partnership with 24-year-old Robert Campbell, formerly of Waltham, Mass., and Mr. Hurd's son, Howard, 20.

Last year Mr. Hurd's registered Holstein herd milked an average of 13,455 lb. of milk per cow, and an average of 544 lb. of butterfat on a Dairy Herd Improvement Assn. record.

Mr. Hurd's lush green fields of grass or clovers provide plenty of pasture from early May until fall. Judges noted that he was using a well planned forage program, making good use of "strip grazing" methods. Besides pasturage, Mr. Hurd put 700 tons of silage in his three upright silos and baled 11,000 bales of hay which are dried in the mow with an electrically operated drier.

To improve land fertility, he applied 720 tons of poultry manure and 560 tons of other manure to his soil last year besides 50 tons of various grades of commercial fertilizers.

The Barringer farm features a zero grazing program from fields with outstanding stands of ladino clover, alfalfa and orchard grasses, and what the judges considered a superior fertilization program to maintain strong stands of legumes.

Mr. Barringer's feeding program is unusual since he feeds his cows primarily on fresh green feed in summer and grass silage and grain in winter. He does not feed his animals any hay.

His 37 milking Holstein cows last year produced a per-cow average of 11,564 lb. of milk and 461 lb. of butterfat. He puts up 450 tons of grass silage annually in an upright silo and a 200 ton trench silo (dug into the ground).

John H. Morrill and his son, David, of Penacook, N.H., operate a farm which impressed the judges as having a well organized feed production program including in addition to pasturing program providing freshly cut green feed for his large herd of 84 milking cows.

Mr. Froberg's herd averaged 10,370 lb. of milk produced per cow and 413 lb. of butterfat. A majority of his cows are of the Ayrshire breed, but he also milks some Holsteins.

Henry T. Whiting has been operating his dairy farm for 37 years. His excellent alfalfa stands were noted by the judges who also commended his excellent farm management practices and his use of a hay finisher producing good quality forage.

His mixed herd of 43 milking cows produced about 10,800 lb. of milk per cow in 1956 and 420 lb. of butterfat. He averaged about one pound of grain fed for each four pounds of milk produced. He also put up 275 tons of silage in two upright silos.

NPFI Authorizes Grant to Purdue

WASHINGTON — The National Plant Food Institute has entered into an agreement with Purdue University to establish a research grant at the university's Agricultural Experiment Station with the department of agricultural economics, "for the purpose of supporting a program of research covering the economics of fertilizer use in crop production with special emphasis on economic analysis of agronomic data," Dr. Russell Coleman, executive vice president of the institute, has announced.

The one year grant of $2,100 authorized by the institute will permit the university personnel to assign qualified staff members to direct the graduate students and to supervise the project, including the necessary field, laboratory, and greenhouse facilities.

Dr. Coleman said that "more and more the need has become apparent for a stepped-up program in the field of fertilizer economics, particularly the economic analysis of agricultural data."

Sales Representative

NEW YORK — Warren B. Freedlund has been appointed northeastern sales representative, headquartered in New York city, for the polychemicals division of West Virginia Pulp and Paper Co., it has been announced by H. E. Coleman, division sales manager. The division produces Indulin and Polyfon, products which have applications in such fields as asphalt emulsions, protein removal and recovery, resin extension, rubber reinforcing, insecticide dispersants and in ceramics.

Books on Fertilizers And Their Use

MANUAL ON FERTILIZER MANUFACTURE— Second Edition

Vincent Sauchelli

A complete up-to-date revision of this well known book, that reviews in simple, everyday language the processes of manufacture of superphosphates, of ammoniation, and the formulation and preparation of mixed fertilizers. Indispensable to fertilizer plant supervisors and operators, and a valuable aid to research men and teachers. New chapters added: on plant nutrition, mixed fertilizers, ammoniation, granulation, revised and brought up-to-date. 80 tables of practical information $4.50

SOIL FERTILITY AND FERTILIZERS (1956)

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An advanced college text, for juniors and seniors, following backgrounding course in soils. Covers elements required in plant nutrition, their role in plant growth, and the soil reactions to these nutrients. Several chapters on manufacture, properties and agronomic value of fertilizers and fertilizer materials. Latter part covers soil fertility evaluation and use of fertilizers in sound management program. 430 pages, cloth bound $7.75

PLANT REGULATORS IN AGRICULTURE

Dr. Harold B. Tukey

Published September, 1954. A text book giving background material for county agents, farmers, citrus growers, nurserymen, gardeners; providing fundamentals and general principles; covers encouragement of roots by plant regulators, control of flowering and fruit setting, parthenocarpy, abscission, prevention of preharvest fruit drop, delaying foliation and blossoming, maturing and ripening, inhibition of sprouting and weed control. Brings together specialized knowledge of 17 authorities in the field, with two chapters written by Dr. Tukey, head of department of horticulture at Michigan State College. 269 pages $5.50

THE CARE AND FEEDING OF GARDEN PLANTS

Published jointly by the American Society for Horticultural Science and the National Plant Food Institute.

An entirely new, one-of-a-kind book, it is designed to acquaint readers with nutritional deficiency symptoms or "hunger signs" of common yard and garden plants including lawn grasses, shrubs, flowers, garden vegetables, and cane and tree fruits. It stresses plant "feeding," or "what makes plants grow." Sixteen of the nation's leading horticultural authorities collaborated in its preparation. Cloth bound, 300 pages of text and illustrations including 37 pages in full color $3.00

PHOSPHATES IN AGRICULTURE

Dr. Vincent Sauchelli

A valuable book for the fertilizer salesman, agricultural teacher, farmer, fertilizer agent and county agent. Deals with rock phosphate versus superphosphate and colloidal phosphate, with the origin of phosphorus, the mining and processing of the phosphate rock, granulation of superphosphates, fixation of phosphates in the soil, losses of phosphorus and replenishments, phosphorus in nutrition, radioactive phosphorus, basic slag, fused and sintered phosphates and TVA research data on phosphates from field tests in 13 states. 176 pages and well illustrated $2.75

ECONOMIC AND TECHNICAL ANALYSIS OF FERTILIZER INNOVATIONS AND RESOURCE USE

By E. L. Baum, Earl Heady, John Pesek and Clifford Hildreth.

This book is the outgrowth of seminar sessions sponsored by TVA in 1956. Part I—Physical and Economic Aspects of Water Solubility in Fertilizers. Part II—Examination of Liquid Fertilizers and Related Marketing Problem. Part III— Methodological Procedures in the Study of Agronomic and Economic Efficiency in Rate of Application, Nutrient Ratios and Farm Use of Fertilizers. Part IV—Farm Planning Procedures for Optimum Resource Use. Part V—Agricultural Policy Implications of Technological Change. It presents new methodological techniques for more efficient handling of research problems related to fertilizers and provides more meaningful answers to problems of practical application $4.50

HUNGER SIGNS IN CROPS—Second Edition

A symposium—published jointly by the American Society of Agronomy and the National Plant Food Institute.

A comprehensive study of nutrient-deficiency symptoms in crops compiled by 19 of the leading authorities in the field. It is being widely used by college professors, research and extension specialists, industrial chemists and agronomists, county agents and teachers of vocational agriculture. Many farmers have found it of particular value in planning their fertilizer programs. Cloth bound, 390 pages, 242 illustrations, including 124 in full color $4.50

USING COMMERCIAL FERTILIZER (1952)

Malcolm H. McVickar

Dr. McVickar is chief agronomist of the National Fertilizer Assn. The book deals specifically with commercial fertilizer, how it is produced and how to use it. It is non-technical. It includes chapters on how to measure fertility of soils, secondary and trade-element plant foods. 208 pages, 106 illustrations, cloth bound..... $3.00

COMMERCIAL FERTILIZERS, Their Sources and Use—Fifth Edition (1955)

Gilbeart H. Collings

Based upon the author's practical experience as an experiment station agronomist and teacher, and incorporating information on recent developments by agronomists, chemists, engineers and fertilizer manufacturers. Authoritative on problems concerning commercial fertilizers and their use in gaining larger yields. 160 illustrations, 522 pages $8.00

APPROVED PRACTICES IN PASTURE MANAGEMENT (1956)

M. H. McVikar, Ph.D.

Outlines clearly and concisely how to have productive pastures to furnish high-quality forage for livestock, economically and efficiently. Written for grassland farmers. Covers the important activities associated with establishment, management and efficient use of pastures as grazing lands or as a source of fine winter feed for livestock. It is as specific as possible for all U.S. pasture areas. Twenty chapters, 256 pages, illustrated $2.40

MANURES AND FERTILIZERS

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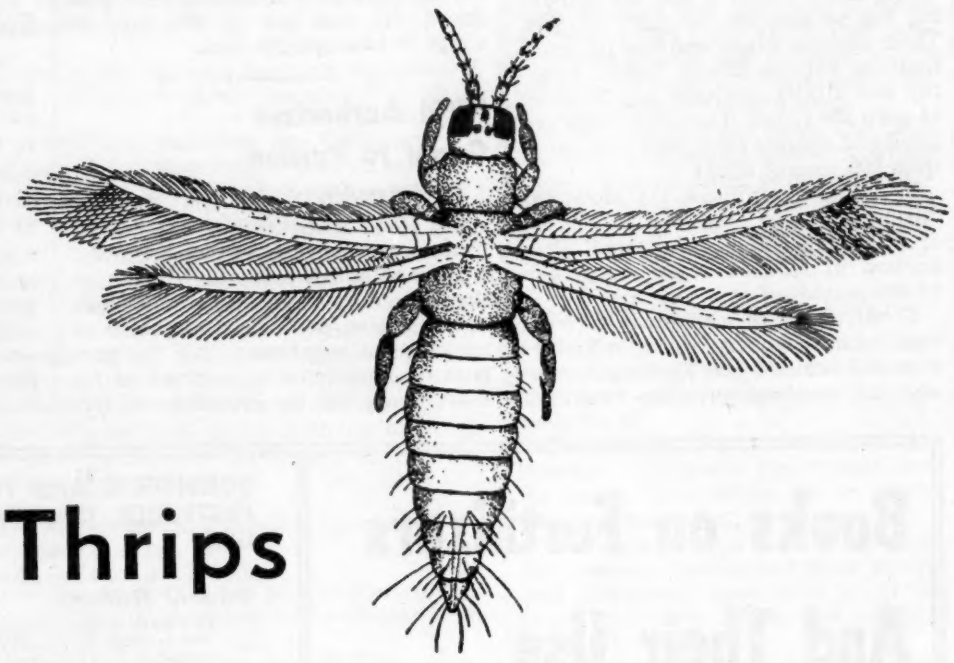
BUG OF THE WEEK

Mr. Dealer—Cut out this page for your bulletin board



Thrips

How to Identify

Thrips are small insects, rarely as long as an eighth inch. They feed on the sap of various plants. Many thrips have four wings which are laid back over the abdomen when at rest. The wings are narrow and are fringed with long hairs, which account for the name of the order, Thysanoptera, which means "bristle wings." The foot of the thrips is peculiar, having no claws, but only hooflike depressions surrounding a small bladder.

Habits of the Thrips

Eggs are laid on the tissues of various plants as a rule, although in some species of thrips, eggs are inserted into slits in the plants. Habits vary somewhat with the species of thrips. Gladiolus thrips, for instance, overwinter and may reproduce on the stored gladiolus corms. During the growing season, the larvae and adults attack the foliage and flowers of the growing plant. In the summer, a generation of the thrips may be completed in 2 weeks. Onion thrips pass the winter in the north in both adult and larval stages, on onion plants left in the fields, and in the crowns of alfalfa and clover. The female lays her small whitish eggs in the more slender tissues of leaves. These eggs hatch in from 4 to 10 days. The larvae begin eating as soon as they are hatched, pass through two stages while feeding upon the plants and complete their growth in about five days. They then enter the soil where they pupate. The pupal stage lasts about four days under favorable conditions. A generation thus is completed in about 2 weeks. Generations overlap and all stages may be found in fields during the summer.

Damage Done by Thrips

Thrips damage a wide variety of flowers and crops, including onions, tobacco, citrus and cotton. They pierce the skin of young plants and then suck the sap, leaving malformed seedlings. In cotton, they punch holes in the cells of new cotton leaves and prevent full growth. The tobacco thrips mars leaves used for cigar wrappers and also injures seedling peanuts, causing many to die. The gladiolus thrips ruins flowers and foliage of growing plants. Plant viruses are known to occur in the order Thysanoptera, which includes thrips. The insect gets the virus from a diseased plant, then moves to a healthy plant and infects it during the feeding process.

Control of Thrips

Recommendations for control materials, timing, application practices, dosages, etc., may vary widely in different states and sections of the country. It is therefore difficult here to attempt to give specific suggestions as to what materials should be used or how they should be applied. Local authorities such as county agents, state experiment station entomologists, and manufacturers of the various pesticides should be consulted for specific information. Labels on pesticide containers carry full instructions on use and dosages. Users should always be urged to study labels carefully before applying any insecticide on food or feed crops to avoid the risk of illegal residues at harvest time.

Drawing of Thrips furnished Croplife through courtesy of the artist, Marvin H. Frost, Jr.

Fertilizer and Irrigation Show Profit In Wisconsin Pasture Demonstration

MADISON, WIS.—A pasture demonstration which is turning up a profit of more than $500 above cost of fertilizer and irrigation was a feature of last week's Farm Progress Field Days, held by the University of Wisconsin.

The demonstration was sponsored by Olin Mathieson Chemical Corp. in cooperation with the Juneau County Agricultural Extension and Soil Conservation Service and the University of Wisconsin Department of Soils. It was set up on the Wells-Johnson farm near Mauston, Wis.

A 14-acre pasture field with a creek running through the middle of the field was selected for the demonstration. The field was divided nearly half and half (the east half, not quite as good as the west half, was given an advantage of an extra two acres). The south side (six acres) was treated with 13-13-13 fertilizer at 650 lb. per acre early in April. An electric fence was set up to separate the two halves.

The entire herd of cattle, some 20 milk cows, eight dry cows and heifers, and two horses has been rotated back and forth from the fertilized to the unfertilized side for a period of 10 days (as of Aug. 26). Records have been kept of the number of days and pounds of milk for the entire herd on each half of the pasture. The increase in the production of grass has thus been measured in terms of milk production and the extra day of pasture for the dry cows, heifers and horses.

As of July 2, another 300 lb. of 13-13-13 fertilizer was applied to the south fertilized six acres of pasture.

In addition to this application of fertilizer, the south six acres has been irrigated as needed during the periods of dry weather. A total of about six inches of water had been applied as of Aug. 26.

Irrigation equipment for the project was furnished by Olin Mathieson Chemical Corp. and set up by the Wisconsin Irrigation Co. of Cambridge, Wis.

On Aug. 15, ammonium nitrate (dissolved in water) was applied at 200 lb. per acre through the irrigation system. Water has been supplied from a deep spring fed water hole or pit that was dug with an excavator in mid-June.

Records for the period of May 9, the day the cattle were turned into the fertilized side, to Aug. 26, were summarized by Dr. C. J. Chapman, University of Wisconsin soils department.

Cows were on the fertilized half 49 days, and they produced 25,321 lb. of milk with a value of $855.84.

Cows were on the unfertilized half 20 days, producing 10,092 lb. of milk valued at $341.11.

The value of pasture on the fertilized side for eight dry cows and heifers and two horses for an extra 29 days was estimated at $40. The total value of extra feed for entire herd for 29 days from the fertilized half was $544.73.

The cost of fertilizer was $309 and the irrigation cost was set at $59. With the value of the extra milk and pasture for the entire herd for the 29 extra days it was on the fertilized pasture set at $514.73, the profit over and above the fertilizer-irrigation cost as of Aug. 26 was $146.73.

"We may reasonably expect the fertilized pasture to furnish extra feed during the next 60-80 days in about the same ratio as records have shown for the period May 9 to Aug. 26," Dr. Chapman said.

In fact, the residual effect of the fertilizer which has been applied should carry the fertilized pasture in a state of lush production for the next 80 days. The extra feed thus provided is clear profit.

"If we credit an extra 25 days of pasture to the fertilized side, and with milk production for the next 80 days at about 80% of the production up to Aug. 26, we arrive at a figure of 11,000 lb. of milk which at the average price $3.38 per hundred gives us an additional return of $371.80. Added to the net gain as of Aug. 26 of $146.73 we have a total estimated profit of $518. This then is the profit or clear gain over and above the cost of fertilizer and water."

Gloomicides

Admittedly there must be a lot of women who are good drivers but there are still too many of them in an advisory capacity.

★

A proud father had given his small daughter a splendidly equipped doll's house for her birthday. On his return after a week's absence he asked her how she liked it.

"It's very nice, Daddy," she said.

"But where is it?" he inquired, not seeing it anywhere about the house.

"Oh, I've rented it furnished to Cousin Mary for 10¢ a week," came the reply.

★

The preacher was haranguing the congregation about the young people sowing wild oats. As he paused for breath, there came a voice from the rear: "Well, you gotta sow 'em while you got 'em."

★

First Old Maid: "I hate to think of my youth!"

Second Old Maid: "Why, what happened?"

First Old Maid: "Nothing."

★

Four card sharps got together on the train and a tense, hard-fought contest ensued. Suddenly, the dealer tossed his cards down and said: "This game is crooked."

"What makes you think so?" queried the card sharp on his left.

"I can tell," replied the dealer, "because that guy is not playing the same hand I dealt him."

★

An old Negro, driving his wagon along a Tennessee road, was hailed by a white planter.

Planter: "Good mornin' uncle. How'd your crop turn out?"

Negro: "Boss, I plant my cotton, weed it, raise it, bale it—an' den de ducks et it all up."

Planter: "The ducks ate it!"

Negro: "Yes, suh. It wuz dis way. I sent dem bales to Memphis to be sold. Dey deducks sum'pin' for de railroads, dey deducks sum'pin for handlin' it, dey deducks sum'pin for sendin' de money back—deducks got all of it!"

★

"I used to be terribly conceited but my psychiatrist straightened me out and now I'm one of the nicest guys in town."

★

Boss: "What are you doing here. I fired you a couple of weeks ago."

Office boy: "Yes, I know. I just came back to see if you were still in business."

★

In a village election in rock-ribbed Republican Vermont, one Democratic vote was discovered before the tabulation had been completed. Election officials stopped to ponder this marvel, then decided to complete the count. Another Democratic vote turned up.

"That settles it," said one official. "That dad-burned fool voted twice."

WORLD REPORT

By GEORGE E. SWARBRECK
Croplife Canadian and Overseas Editor

The Australians and the New Zealanders, supported by the British, are pushing ahead with their efforts to increase phosphate supplies from the deposits in the Pacific Ocean area. Expanded agricultural development in both Australia and New Zealand is boosting the demand for fertilizers and new sources of supply are being examined.

The British Phosphate Commission has reported on the extent and quality of phosphate deposits on islands near Esperance, on the south coast of Western Australia. The tenor of the report is not optimistic, but hopes of finding other deposits to supplement those on Christmas Island, Nauru and Ocean Island are bright.

Several exploring parties are out seeking deposits of phosphatic guano on the south coast of Western Australia and on other islands off the coast. During 1944 and 1945, recovery of phosphatic guano from Pelsart Island totaled 8,493 tons. This was treated at the British Phosphate Commission's works at Geraldton, and distributed on the local market.

About five years ago a syndicate was formed in Perth to work an island 12 miles from Esperance for guano. The deposits were favorably reported on, but transport and shipping costs proved heavy, and the syndicate ceased operations. A few small amounts of phosphatic guano were recovered from coastal caves and one man has recovered 530 tons of guano in the past 12 months.

Fears have been expressed that the deposits in the three islands of Christmas, Nauru and Ocean may be worked out in the next few years. However, a big expansion plan has been worked out to hike phosphate production on Christmas Island and it is hoped to step up the output to 800,000 tons, from the present 350,000 tons a year, by 1961.

Officials Inspect Possibilities

Three phosphate officials recently visited Western Australia to inspect developments and potentials. They were J. R. Halligan, Australia's phosphate commissioner; C. M. Richwhite, New Zealand's commissioner, and C. P. Young, assistant production manager for the British Phosphate Commission.

Mr. Halligan stated: "An increase in mechanization and an expanded treatment plant will enable Christmas Island to keep pace with Western Australia's big agricultural development programs. Though the production from the three islands is pooled, most of that from Christmas goes to Western Australia because of its favorable geographical position."

Mr. Richwhite said that aerial top dressing with superphosphates is used more extensively in New Zealand than in Australia, about 400,000 tons a year being spread by air, averaging about 3,400 flights a day.

Pollock for Fertilizer

From Fredericton, New Brunswick, Canada, comes a report that large catches of pollock and sardines have been offset by a limited market demand. So, for what is believed to be the first time, pollock are being sold for fertilizer to manufacturers in Maine. The price is quoted at $4 a hogshead.

Dead Sea Potash Output

The Dead Sea Potash Works at Sodom had exported 53,000 tons of potash by Sept. 1 this year. In addition, the local market absorbed 5,000 tons.

Production is now averaging 7,000 tons a month and since the beginning of this year has doubled compared with the same period in 1956. The director-general of the works, Maj. Gen. Makleff, says that production last month was sufficient to meet all running expenses, though amortization and interest are not yet being covered out of current earnings.

Machinery has been ordered from West Germany for a stockpiling plant to be completed by August next year.

Japan Fertilizer Output

The Japanese government expects that the production of fertilizer in the year August, 1957, to July, 1958, will be in the region of 3.8 million tons. This will represent an increase of 500,000 tons over production in the fertilizer year just ended.

Domestic demand has been estimated at 2.6 million tons with exports absorbing the balance of 1.2 million tons. The chief markets are Formosa and Korea. At the same time, the Japanese say that export competition from the west is likely to be keener in the next few months, following the decline in ocean freight rates.

Recent contracts have been concluded in the price range of $54 to $58 ton, compared with $60 a year ago.

Aircraft Spraying

The Canadians have had considerable success with their aerial spraying of forests to combat tree pests. Now the practice has been adopted in Germany.

After a trial attempt last year, the protective spraying of woodlands from the air has been stepped-up by forestry authorities in Lower Saxony. Three firms are engaged in the project, one British, one Swedish, one Swiss.

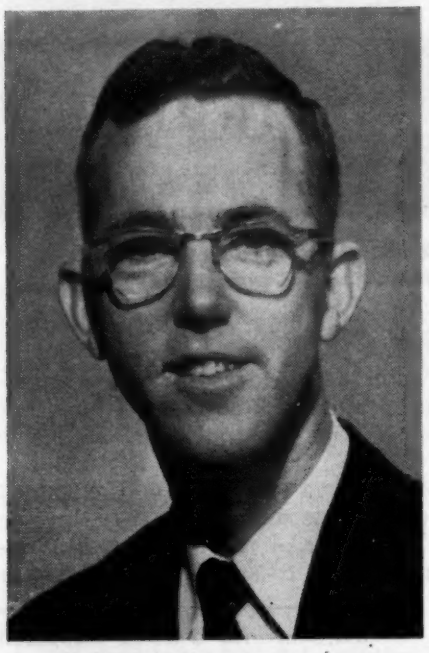
The Forestry Research Institute of Gottingen says the project has been a complete success. Improvised runways were provided and the investment has been well worthwhile, the authority states.

New Plants

A nitrogen fixation factory with an annual capacity of 100,000 tons of ammonium sulfate is to be erected in the Canary Isles by the Compania Espanola de Petroles S.A. of Madrid. The process to be employed for the ammonia synthesis will be the Texaco system, using petroleum oil or natural gas as raw material under license from the Texas Oil Co.

The Dominican Republic has recently opened a new fertilizer plant, a project which is part of a program to make the country independent of imports. It is proving successful... from the point of view of the Dominicans. In 1956, the export of fertilizers from the U.S. to the country fell from a value of $1 million to $250,000.

Recently, a new sulfuric acid plant and superphosphate factory at Avadi, 13 miles from Madras City, India, was opened up. Owners are Shaw Wallace & Co., prominent in the Far Eastern trade.



Carroll E. Walls

Carroll E. Walls in New Du Pont Post

WILMINGTON, DEL.—Carroll E. Walls has been assigned as sales representative for Du Pont nitrogen products in Alabama, Mississippi and Georgia, with headquarters in Atlanta. The appointment is effective Oct. 1.

Mr. Walls will handle sales of "Uramon" ammonia liquors, "Nu-Green" fertilizer compound, "Uramite" fertilizer compound, and "Two-Sixty-Two" feed compound, to the fertilizer and feed industries.

A native of Coy, Arkansas, Mr. Walls, received both bachelor's and master's degrees in agriculture from the University of Arkansas. He joined the Du Pont Polychemicals Department in 1956.

SEED SCHOOL

BOISE, IDAHO—Bob Hadley, director of the Idaho-Eastern Oregon Seedsmen's Assn., announces the Idaho Seed Council will sponsor a seed processors' school at Boise, Idaho, Dec. 5-6.

New South Dakota Company Organized

HURON, S.D.—The Rushmore Seed and Fertilizer Co. has been organized here with capital stock of $400,000. Organizers are M. J. Attebury and Ervin Erickson of Huron.

Massachusetts Apple Crop Hurt by Heat Wave

BOSTON — Massachusetts apple growers are harvesting one of their best crops of recent record despite the prolonged drouth, abnormally severe winter, and below-normal temperatures during August plus a September heat wave.

The heat wave, growers said, is about as destructive to the apple crop as a hurricane would be. Ben Drew of Westford said the heat wave caused McIntosh apples to come to full ripeness and drop before harvesters could get to them.

He said that the crop estimate will have to be sharply cut downwards as the heat caused an exceptionally heavy drop. Previously, the USDA marketing service estimated that the Massachusetts commercial apple crop would total something like 2,700,000 bu. This would be nearly a million bushels more than last year's crop and considerably more than the 10-year average of 2,524,000 bushels recorded between 1946 and 1955.

Charles Crawford Dies

WASHINGTON — Charles W. Crawford, retired commissioner of the Food and Drug Administration, died recently at the Stanford Hospital in San Francisco at the age of 68.

Mr. Crawford succeeded to the top post of FDA following the retirement of Paul Dunbar in 1951, and then retired from government service in 1954.

Long attached to FDA service both physically and intellectually, Mr. Crawford was one of the strong proponents of the drive to get through Congress the Food, Drug and Cosmetic Act of 1938 when he acted as legislative liaison man for FDA.

Industry Patents and Trademarks

2,806,763

Recovery of Uranium from Leached Mud of the Clinker Process for Producing Phosphoric Acid. Patent issued Sept. 17, 1957, to Frederick T. Fitch and Mary P. From, Baltimore, Md., assignors to W. R. Grace & Co., Norwalk, Conn. The method of recovering uranium from the leached mud of the Clinker process for producing phosphoric acid comprising drying said mud, grinding the dried material, roasting said ground and dried material at above about 1245° F., digesting the roasted material with a dilute solution of a strong mineral acid, and washing the acid and solubilized uranium therefrom with water.

2,806,773

Agricultural Granule. Patent issued Sept. 17, 1957, to Gordon R. Pole, White Bear Township, Ramsey County, Minn., assignor to Minnesota Mining & Manufacturing Co., St. Paul. A method of uniformly controllably applying finely divided trace element materials to media positively affected thereby, which method involves applying to said media a plurality of free-flowing coated granules, each granule comprising a small non-dusting inanimate carrier base granule having an adherent coating over the surface thereof, said coating including finely divided trace element materials as one constituent uniformly dispersed throughout a tack-free non-hydroscopic abrasive-resistant film-forming binder as a second constituent, one of said coating constituents being essentially insoluble in water, said base granule having a size of at least about 60 mesh and comprising a major proportion of the coated granule, said binder being present in an amount permitting handling of a mass of the coated granules without substantial chalking and without substantially wearing away the coating by mutual abrasion of the granules, said trace element materials further being available to action by soil solutions, and at least slowly soluble in ionic form in said solutions, the trace elements of said finely divided trace element materials being present in an amount of at least about 2% by weight of the coated granule, the resulting coated granule being substantially non-hydroscopic and of a size of at least about 48 mesh.

Industry Trade Marks

.The following trade marks were published in the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. (See Rules 20.1 to 20.5.) As provided by Section 31 of the act, a fee of $25 must accompany each notice of opposition.

Kilonex, in capital letters, for crab grass killer. Filed March 15, 1957, by Hydroponic Chemical Co., Inc., Copley, Ohio. First use Feb. 11, 1957.

Petasol, for animal insecticides including a flea killer, and odor killer. Filed March 25, 1957, by Virginia Smelting Co., West Norfolk, Va. First use Nov. 23, 1956.

Gro-Well, for insecticide and fungicide. Filed April 8, 1957, by J. & L. Adikes, Inc., Jamaica, N.Y. First use March 15, 1957.

Granlets, in script, for fertilizer. Filed June 19, 1957, by Minnesota Farm Bureau Service Co., St. Paul. First use Aug. 1, 1955.

Boll Weevil Control With Chlorinated Hydrocarbons Demonstrated in Louisiana

By LAWRENCE A. LONG
Editor of Croplife

MONROE, LA.—A demonstration of cotton insect control on some 1,750 acres in Louisiana was made by Hercules Powder Co. on Sept. 19-20, before a group of editors, radio and television farm directors, entomologists and other interested persons. The fields were located on nine farms in parishes where control of the boll weevil and bollworm had proved particularly difficult for the past several seasons.

Because of reports of failures to control the boll weevil with commonly-used insecticides in the state, all the chlorinated hydrocarbons were restricted in the 1956 season, and this year were removed from the Louisiana recommendations for boll weevil control over most of the state.

Journeying over a broad area of Louisiana by plane and bus, however, the visiting group was shown field after field where applications of toxaphene and toxaphene-DDT combinations had given good control, as compared to adjacent untreated fields where the crop appeared to be damaged severely by the insects. Unseasonably wet weather during most of the season complicated the control program, but failed to nullify the work of the pesticides.

Farmers interviewed in their cotton fields showed enthusiasm for the program, several remarking that a complete plan, including good fertilization and frequent applications of pesticides during both the early and late seasons brought down the cost of production per bale. Russell Ratcliff, who has 70 acres in cotton in Tensas Parish, estimated that he would get from 1½ to 2 bales an acre from his field. George Yerger, with 150 acres near Tallulah, Madison Parish, has approximately the same expectancy from his plantings.

Somewhat the same story came from other farmers in the parishes of Matchitoches, Caddo, Rapides, Avoyelles, East Carroll and Ouachita. The largest acreage involved in the tests was on the farm of C. M. Hutchinson in Caddo Parish, where 450 acres were treated.

Background information and details on how the demonstrations were conducted during the 1957 season were outlined by company spokesmen. They said that fields were selected in each of the state's localities where boll weevil problems were especially significant, with all of them having a historical record of severe boll weevil infestation.

"Farmers selected were those interested in a more economical insect control program, lower late-season infestation counts, and adequate protection for their livestock, other farm crops, and applicators," the company said. "In addition they all possessed suitable equipment and expressed a willingness to make applications according to our suggestions.

"The over-all problem indicated a need for an early season control program. This type of program would reduce not only overwintering weevils, but would also control fleahoppers, thrips, plant bugs, and other insects which, along with the boll weevil, destroy the early squares of the cotton plant.

"Thrips were controlled to allow the plants to make fast early growth which, in turn, permits the cotton to fruit earlier, thus allowing earlier maturity. Early maturing cotton is more valuable not only due to quality, but also it tends to escape extreme build-up of pests late in the season.

"The program began as soon as the cotton came up to a stand with two applications of approximately a pint of toxaphene an acre, at seven-day intervals, to control thrips. Following these two applications, four applications of toxaphene of one quart an acre, at seven-day intervals, were made to control overwintering weevils, fleahoppers, plant bugs, and other insects which attack cotton early in the season.

These latter applications were timed to start at about the time the cotton was in the six to eight-leaf stage, or when the plant starts setting tiny squares and continued up to the date that emergence records show that 95% of the overwintering weevils have emerged. On some of the farms a final early-season application of 2-1 mixture was used to take care of the spring brood of bollworms, which frequently attack cotton in Louisiana.

"Good control of all these pests was indicated from the excellent early crop that was set in all locations. Fields which adjoined or were in the same locality that were not treated failed to set or only partly set an early crop.

"Late-season control for the boll weevil was started at most locations in the early part of July. The timing of these applications was based on a rising infestation; or in other words, when the first generation weevil was emerging and starting to feed on squares. Generally speaking, these applications were started on or before the time that 10% of the squares were punctured. A mixture of toxaphene-DDT, 2 lb. toxaphene to 1 lb. DDT, was used in all of the late-season applications. (This formulation has given excellent boll weevil control and superior bollworm control but for one reason or another farmers frequently control only one of these pests and let the other one cause damage.)

"At some of the locations where aphids developed, an application of ethyl parathion was used to control this pest. (This particular chemical was used because it is a good aphicide and is not generally considered effective against the boll weevil. This made it possible to evaluate the effectiveness of toxaphene and the toxaphene-DDT formulation against the boll weevil.)

"The 2-1 formulation in late season, applied at 4-5 day intervals, gave excellent boll weevil and bollworm control as indicated by the infestation records.

"This work was carried out during an unusually wet year in which numerous heavy rains and showers occurred during the entire season. All applications, throughout the season, were made by the farmers with conventional equipment or by local aerial crop spraying operators under the farmers' supervision.

"In addition to the fields included in the demonstrations, observations were made and records obtained on several adjoining fields not included in the program. Several of these fields suffered severe damage from boll weevils and bollworms.

"Two qualified professional cotton scouts were employed to make regular weekly infestation counts of the various insects in the fields involved in this program. Their records, as well as other pertinent data, formed complete records on each field.

"Weather conditions during this past season, especially heavy rainfall, were highly conducive to a heavy boll weevil infestation. Weather conditions and insect populations such as were encountered this season are needed to obtain the most valid information."

WEED CONFERENCE

NEW YORK—The 12th annual Northeastern Weed Control Conference will be held at the Hotel New Yorker here Jan. 8-10.

acement Problems on onference Agenda

SHREVEPORT, LA.—The problem fertilizer placement for cotton ll be explored at the Beltwide Cot- n Mechanization Conference here t. 2-4 by Dr. G. E. Smith of the iversity of Missouri. He will speak forms and placement of fertilizers low-cost cotton production.

This subject, as it relates to spray- and dusting equipment, will be scussed by Kenneth Messenger of e U.S. Department of Agriculture, ltsville, Md., under the topic "Fu- re Application Equipment for Agri- ltural Chemicals."

The conference is sponsored by the ational Cotton Council in coopera- on with Louisiana State University d other land-grant colleges in the otton Belt, farm equipment industry, S. Department of Agriculture and rm organizations.

wards Established or Soil Testing

ATHENS, GA.—Awards have been nnounced for Georgia county agents ho conduct soil testing programs, by harles O'Kelley, University of Geor- a extension agricultural leader.

The award program has been es- blished because many Georgia rmers are not taking advantage of e free soil testing facilities avail- ble, Mr. O'Kelley said.

Only 21,213 soil samples were ana- zed last year, university agrono- ists reported, which represents only bout 5% of the farms in the state. esting stations can handle upwards f a hundred thousand samples an- ually if evenly distributed through- ut the year, Mr. O'Kelley said.

The soil testing award program, hrough county agents, will also com- end local organizations, such as ivic, community and 4-H Clubs, fer- ilizer and seed dealers who encour- ge and promote soil testing in their ounty.

Southern Nitrogen Co., Georgia Lime Rock Co. and Willingham-Little Lime Co. are providing the funds for onducting the award program.

ncrease Shown in Minnesota Sales

ST. PAUL—Minnesota fertilizer ales climbed above the 400,000 ton ark in the fiscal year ended last une 30, the State Department of griculture has reported.

The 1956-57 sales totaled 414,140 ons, for a gain over 361,325 tons the revious fiscal year.

Sales of mixed goods in 1956-57 mounted to 334,884 tons, compared ith 295,708 tons the previous fiscal ear, while sale of materials climbed o 79,256 tons from 65,617 tons.

Included in the 1956-57 sales were 6,950 tons of 5-20-20, 67,313 tons of -24-12, 21,461 tons of miscellaneous grades with more than 27 plant food units, 16,945 tons of 8-24-12, 16,873 tons of 0-20-20, 8,118 tons of am- monium nitrate, 12,503 tons of an- hydrous ammonia, 10,650 tons of nitrogen materials, 6,458 tons of nor- mal superphosphate, 25,979 tons of concentrated superphosphate and 3,615 tons of muriate of potash.

The total sales for 1956-57 also included 2,019 tons of pesticide- fertilizer mixtures.

urning No Answer

PORTLAND, ORE.—Burning of grain stubble and straw is not the answer to controlling the Hessian fly which raised so much havoc through- out the Willamette valley during the past growing season. This fact is em- phasized by Wilbur Burkhart, Ore- gon's Washington County agent, and John J. Inskeep, Clackamas County agent, in advice issued to growers. "Burning of stubble and straw will not control the fly for several rea- sons . . . the most obvious being that every field would have to be burned if the idea were to be successful," Mr. Burkhart said. "Fly-infested fields remaining unburned would offer a source of flies to spread over the en- tire area and lay eggs in spite of any- thing the landowner could do."

Fertilizer Shows Carryover Value

MILLER, MO.—A fertilizer demon- stration on the J. H. Glasscock farm near here seven years ago is still showing the carryover value of plant food treatments, according to Ray Graham, Lawrence County agent.

Seven years ago, a strip of a cu- cumber field was fertilized for maxi- mum production, Mr. Graham re- ported, and the remaining portion at a lesser rate. During the intervening years, the entire field has been limed and fertilized alike but the effect of the heavy use of fertilizer is still ap- parent.

On a recent visit to the field, now seeded to lespedeza, Mr. Graham noted that the strip heavily fertilized in 1950 produced 50% more hay per acre than the remainder of the field. And, he added, the strip has outyield- ed the remainder of the field each of the past seven years.

The heavily-fertilized strip was freer of weeds, Mr. Graham said, and the lespedeza was a darker green than was the rest of the field.

10-Page Seed Corn Advertisement Appears

DES MOINES, IOWA—One of the largest advertisements ever to ap- pear in a farm magazine, a 10-page, full-color "corn guide" spread, ap- pears in the September issue of Suc- cessful Farming, consumer publica- tion published here. The advertise- ment is for Funk Bros. Seed Co. and features Funk "G" seed corn hy- brids.

The September issue was chosen because it is believed to be the best month to remind farmers to place their seed corn orders.

The E. H. Brown Advertising Agency, Chicago, planned the adver- tisement which describes 19 seed corn hybrids, lists 19 growers and their testimonials and includes maps show- ing which seed corn is recommended for a particular area.

Dealers have been given a hand- book which includes the 10-page advertisement.

FESCUE SOD FERTILIZATION

LEXINGTON, KY.—Kentucky farmers are being urged to apply ni- trogen fertilizer on fescue sods having little or no legumes. According to Kentucky extension agronomists, fes- cue sods, without legumes, should be top-dressed with 60 lb. of actual ni- trogen per acre, and phosphorus and potassium soil levels should be checked, too.

REMEMBER TO ORDER
CHASE BAGS
There's None Better!

it's just off the press..!

Croplife's second edition of

BUG OF THE WEEK

a dealer's manual of insect pests

Here it is! The second edition of Croplife's Bug of the Week in 8½ x 11" booklet form. It's made up from reprints of the series appearing in Croplife during the past several months. The booklet includes 32 insect pests pic- tured and described—and all are in addition to the 21 which appeared in the original Bug of the Week booklet issued in 1954.

ORDER FOR YOURSELF, YOUR CUSTOMERS

You'll find many uses for this interesting, factual booklet. It's ideal for use by salesmen, dealers—and their customers.

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- European Corn Borer
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- Onion Thrips
- Pepper Weevil
- Rapid Plant Bug
- Rose Chafer
- Two-Spotted Mite
- Cabbage Aphid
- Rose Leaf Beetle
- Potato Leafhopper
- Cotton Fleahopper
- Alfalfa Caterpillar
- Cowpea Curculio
- Corn Rootworm
- House Fly
- Spotted Cucumber Beetle
- Stink Bug
- Yellow-Striped Armyworm
- Blow-Fly
- White-Fringed Beetle
- Confused Flour Beetle
- Corn Earworm
- Leafhopper
- Gypsy Moth
- Mexican Bean Beetle
- Strawberry Weevil
- Harlequin Bug
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Agricultural Equipment Makers Envision Good Sales Prospects for 1958 Season

CHICAGO, ILL.—A promising future for farm machinery manufacturers was predicted at the 64th annual convention of the Farm Equipment Institute held at the Palmer House Sept. 16-18. Spokesmen for manufacturing firms located in many parts of the country were unanimous in their appraisal of the situation, with various speakers specifically pointing out favorable factors.

Curry W. Stoup, vice president of Avco Manufacturing Corp., said that these included the decrease in the number of workers on farms, the cost-price squeeze, and an increasing replacement market. Prospects for an expanding population were also cited as having an important bearing on the outlook.

"Bigger farms with fewer workers create the need for new types of equipment designed to multiply the effectiveness of a single worker," Mr. Stoup continued. "The increase in average farm size and decrease in the number of farms mean that equipment, generally, will have more capacity. This fact is already made evident by development in farm equipment companies' engineering departments."

He added, however, that implement dollar sales will be bolstered by an increasing replacement market resulting from the era of farm mechanization that reached its peak approximately six years ago. Also total dollar sales will increase as a result of larger unit value.

"Our farmers must also be prepared to provide food for 60 million more people in the next two decades —and on no more acreage than is now in production," he continued.

"The long range trend of a growing population with a gradual decrease in total farm workers indicates a healthy long range future for those companies and dealers who meet the need for new, more efficient machines," Mr. Stoup concluded.

H. C. Hanson, president, Hanson Equipment Co., Beloit, Wis., commented favorably on the general outlook for his firm which supplies sprayers for agriculture. "Farm equipment business in general will be about the same in 1958 as in 1957," he said. "Moisture in western areas will improve the crop situation and income situation. However, other areas will not have the crops anticipated earlier.

"Crop production this year is the smallest since 1951 and will have some effect on sales next year. Livestock production seems brighter. Farm prices generally are up slightly, but farm labor rates are up. This means smaller purchasing power for the farmer next year.

"I believe the sprayer business will be better next year than in 1957. With new products, insect conditions and normal moisture, spraying equipment should be a leading item in farm sales."

Bruce Lourie, vice president, Deere & Company, Moline, Ill., said that his firm's sales thus far in 1957 have shown a "gratifying increase over 1956" and a modest increase over 1955. He said that this trend is expected to continue into 1958 for the following reasons:

1. "Farm income is improving. The index of prices received by farmers in August was 5% higher than a year ago. This was the sixth straight month prices have improved. In August they were at their highest level in three years. We now expect that 1957 cash receipts of farmers will total $31.9 billion. This will be a 3% increase compared to the total receipts of $30.9 billion in 1956.

2. "Crop conditions are generally favorable. This is especially true in the Middle West and Southwest where there has been adequate moisture this year.

3. "There are increasing opportunities for the sale of equipment for 'off-the-farm' uses.

4. "Many new products will be available next year as well as improvements in current machines which will further reduce the long hours formerly required in farming operations. In addition there is a shortage of good farm labor and the cost of such labor is increasing. The only practical solution to this problem for farmers is modern, labor-saving and cost-reducing farm equipment — increased mechanization and automation on the farm.

5. "The increasing population in the U.S. requires and will continue to require, for many years to come, increasing amounts of food and fiber.

"Perhaps the two biggest 'ifs' in the outlook for 1958 are farm prices and government action on a new farm program."

Fredrik H. Raedel, Jr. In New Black Leaf Post

CLEVELAND — Appointment of Fredrik H. Raedel, Jr., to the position of sales manager for consumer products was announced here Sept. 25 by George V. Dupont, general manager of Diamond Black Leaf Products, a unit of Diamond Alkali Co.

In making the announcement, Dr. Dupont said, "The appointment of Mr. Raedel to the Black Leaf staff is expected to result in more effective coordination of Black Leaf's sales and marketing activities in lawn and garden chemicals and other consumer products."

Prior to joining the Black Leaf organization, Mr. Raedel had been retained as a marketing consultant, directing market analysis, advertising, consumer product testing, packaging, sales organization, sales analysis and over-all budgeting for the past 12 months. Before establishing his own consulting service in 1954, Mr. Raedel was grocery sales manager for the Monsanto Chemical Co.

WOODY PLANT CONTROL

BERKELEY, CAL.—A combination of chemical control with other methods is showing most promise in clearing western rangelands of woody plants. Except for a few brush types, it appears that chemical will be used to follow mechanical or fire control or a combination of both, according to Oliver A. Leonard, University of California weed control specialist of the Davis campus.

CFA to Hear Talks By True D. Morse, Russell Coleman

SAN MARINO, CAL. — True D. Morse, under secretary of agriculture, and Dr. Russell Coleman, executive vice president of the National Plant Food Institute, both of Washington, D.C., will be the featured speakers at the 34th annual convention of the California Fertilizer Assn., it has been announced by Jack Baker, Bandini Fertilizer Co., Los Angeles, association president. About 600 are expected from the U.S. and Canada.

The convention will be held Nov. 3-5 at the St. Francis Hotel, San Francisco. The addresses to be given on Nov. 4 will touch upon different facets of the convention theme, "Our Partnership With Agriculture." A panel discussion on that subject will be the feature of the Nov. 4 afternoon program.

Moderated by Dr. D. G. Aldrich, Jr., chairman, department of soils and plant nutrition, University of California, Davis and Berkeley, the panel will consist of Dr. George B. Alcorn, director of agricultural extension, University of California, Berkeley, representing official agriculture in the state; J. Earle Coke, vice president, Bank of America, San Francisco, who will speak for crop production financing agencies; John Martin, Jr., Salinas grower and shipper, and a past director of Western Growers Assn., on agricultural marketing problems, and Lowell W. Berry, president of the Best Fertilizers Co. and a director of the association, of Oakland, representing the fertilizer industry.

Annual reports will be heard from Mr. Baker; M. E. McCollam of San Jose, chairman of the association's Soil Improvement Committee; and from Sidney H. Bierly, general manager.

Four directors, each to serve for three years, and the 1958 association officers will be elected at the business meeting, which will also act on the proposed budget for the year 1958. Mr. Baker reported that advance registrations for the convention are being received at the association office. Interested persons are asked to contact the general manager at 475 Huntington Drive, San Marino 9, Cal., for complete information.

HORTICULTURIST HONORED

NEWARK, DEL. — The American Society of Horticultural Science has awarded the Alex Laurie award for "an outstanding contribution to floriculture in 1956" to Dr. Charles W. Dunham, University of Delaware horticulturist. He won the honor for research conducted on the exchange capacity of the roots of some ornamental plants.

AT GEORGIA MEETING—Caught in a huddle at the recent meeting of the Georgia Plant Food Educational Society are, from left to right, Fielding Reed, American Potash Institute, secretary-treasurer of the society; Dr. Russell Coleman, National Plant Food Institute, Washington, and W. A. Sutton, University of Georgia College of Agriculture. A report of the meeting appeared on page 2 of the Sept. 9 issue of Croplife.

Dr. Clare B. Kenaga

JOINS PANOGEN — Dr. Clare B. Kenaga has joined the research staff of Panogen, Inc., as a plant pathologist. From headquarters at the Panogen research laboratory at Woodstock, Ill., he will conduct research and field development work for both Panogen and its affiliate, Larvacide Products, Inc. Dr. Kenaga completed undergraduate study at Western Michigan College and the University of Michigan where he received a M.S. degree in botany. He received his Ph.D. in plant pathology from Michigan State University.

Fertilizer Response Found in Sandyland Trials in Kansas

MANHATTAN, KANSAS — Fertilizers have increased stands and yields of crops at the Kansas State College sandyland experiment field near St. John, according to Marvin Lundquist, superintendent. He pointed out at the recent fall field day that while increased yields are needed so also is quick growth of crops to provide cover for the erosion-subject soil. In tests at the field nitrogen has given the quick growth and phosphorus has helped in early root development.

Over a 3-year period at the field 50-lb. per acre applications of nitrogen have given a 6-bu. average yield increase. The nonfertilized plots averaged 9.3 bu. and the fertilized plots 15.3 bu. A 100-lb. per acre application increased yields one bushel an acre over the 50-lb. rate.

Grain sorghums this year responded well to nitrogen and did still better when phosphorus and potash were added. From observation of his grain sorghum fertility plots Mr. Lundquist estimated that the plots which received all three have been two to three weeks ahead of the plots getting no fertilizer. From past results the application of 40 lb. of each nitrogen, phosphorus and potash have been the most economical on sandyland. Applications at the time of seeding were most beneficial as they promoted earlier growth, he added.

"Anything that can be done to get cover on the land and prevent wind erosion is welcome here," Mr. Lundquist said. "In this sand we have quite a variability in soil across a field. We're particularly concerned about the 'blow-out' spots. By using stubble mulch grown from previous crops it appears we can pretty well control them."

GREEN PASTURE WINNER

COLUMBIA, TENN.—R. A. Sewell, White County beef cattle farmer, was given the Green Pasture Awards for the outstanding pasture program in Middle Tennessee. His program is based on soil tests as a guide for fertilization and he produced all the grain needed to feed his ten sows and their litters plus some grain fed to steers.

Colorado Firm Gets Extra Farm Chemical Business With Personal Service, Custom Work and Advertising

By Jess Blair
Croplife Special Writer

Fertilizers and insecticides are big business in the Arkansas River Valley of eastern Colorado, where irrigated cropland is in production.

Operating in this area is the Colorado Plant Food Co., located at Manzanola, where the firm has a mixing plant and retail store. The owner of the company, R. M. Pitcher, moved the business from the San Luis Valley several years ago, because the opportunities seemed greater here in the green oasis of the old dust bowl.

It is also an area where farmers are fast turning to a complete chemical program in their farming methods. No farmer would think of trying to raise and harvest a group without the use of fertilizers and insect control, says George Myer, who is manager of the firm.

"Fertilizers are being used more and more every year," Mr. Myer says. "Some plant food has been lost through heavy cropping, but yields are getting so high that continuous application must be practiced every year."

The company is a combination wholesale and retail firm. It ships in raw materials to the plant, where they are mixed and sacked for distribution of the drivers. So really the operation of the machines, and for the salvation to retail dealers or used directly from headquarters.

"If a store owner gets behind or for some reason can't give service to some farmer, then we take care of it. But we don't compete with dealers who are jobbing our products or our retailers," says Mr. Myer.

Perhaps the most profitable phase of the business is in spreading fertilizers directly to the fields. The company owns five tractor-powered spreaders and keeps two more for lease to farmers who wish to do their own work.

The company keeps regular drivers during the busy spring season, and sends them up and down the valley for many miles to do custom application. Farmers pay a certain amount for each acre fertilized plus the cost of the material used. There is no charge made for driving to and from a field unless it is located quite a distance from the plant.

"Our profit comes mostly from the sale of fertilizers," says Mr. Myer. "We charge enough for the machines to pay for the expenses and depreciation and owner pays very little more than if he bought the fertilizer and spread it himself."

The fertilizer business was especially good this last spring. Retail dealers and farmers also bought large quantities, while some sales were made to small independent contractors in the business of doing custom spreading.

Insecticides have also become a big seller and quite profitable, according to Mr. Myer. They are sold directly to farmers, but the biggest part goes to aerial contractors who buy direct from the company.

"We have a lot of insects in this valley," Mr. Myer says. "The warm summers, high humidity and lush crops seem to attract bugs and worms from everywhere. It's a constant fight with insects from the time crops emerge until they are harvested, and these aerial applicators are kept busy several months a year. We work closely with them, take orders for them and keep abreast of any new type chemical that comes on the market."

There is also a trend toward higher analysis fertilizers and materials that are more water soluble. Fertilizers most widely used this year have been superphosphate, anhydrous ammonia and other nitrogen materials. During the last year or two, farmers have been using considerable 15-24-12 on potatoes.

NEW BUSINESS — Shown here is one of the five fertilizer spreading tractors used by the Colorado Plant Food Co., Manzanola, Col. This type of service has brought much new business to the firm.

Some farmers are applying nitrogen and phosphoric acid directly to irrigation water. The Colorado Plant Food Co. often sends personnel to the field to help a farmer set up equipment for this type of application.

In explaining why the company had managed to acquire so much of the farm chemical trade of eastern Colorado, Mr. Myer listed the following points:

1. Any company selling fertilizers, insecticides, weed killers and other chemicals must be prepared to give good service. To do this, there must be a few people on the staff who are trained both academically and through experience. They must know the soils, type of crops grown, and have a thorough knowledge of insects and what is needed to kill them.

In selling fertilizer, soil analyses are needed, the history of the field should be learned from talking with the owner, and results checked after the fertilizer is applied.

2. The staff must be well organized, and the machinery routed and moved quickly to save time. When half the year's profits are made in just a few weeks' time, there must be a well-planned effort to make every moment count.

When orders are received, equipment must be deployed from one field to another with no lost time or mileage. There can be no quitting at 5 p.m., just because salaried employees in town do this. The day may last from daylight till dark, maybe 12 or 14 hours per day, though the drivers are well paid for this extra time.

3. Credit must be watched and handled in a business-like manner. Many of the sales are for cash, and the rest is on a 10-day open account. The company gives a small discount if the farmer pays within 10 days, and this eliminates most of the credit troubles.

Rarely does an account run longer than this. If the farmer is consistently slow in paying or tries to keep from paying at all, the company tries to get a settlement of some kind and tactfully tries to encourage him to do business elsewhere in the future.

4. Advertising is always important, and the Colorado Plant Food Co. uses newspapers, TV and direct mailing quite liberally.

"Many owners and managers will say a satisfied customer is the best advertising," says Mr. Myer. "This is partly true, but many of these satisfied customers were first attracted to the store by its advertising.

"Even though a firm is selling good products and personal service at a reasonable price, it can always increase sales by adopting a well-planned and effective advertising campaign."

Sulphur Producers Announce Lower Prices

NEW YORK — Decreases in the price of sulphur have been announced by two producers.

Texas Gulf Sulphur Co. said that it had notified all of its customers in the U.S. and Canada of a decrease of $3 a ton in the sales price of bright sulphur and $2.50 a ton for dark sulphur. The new prices will be $23.50 a gross ton for bright sulphur and $23 for dark sulphur FOB cars mine.

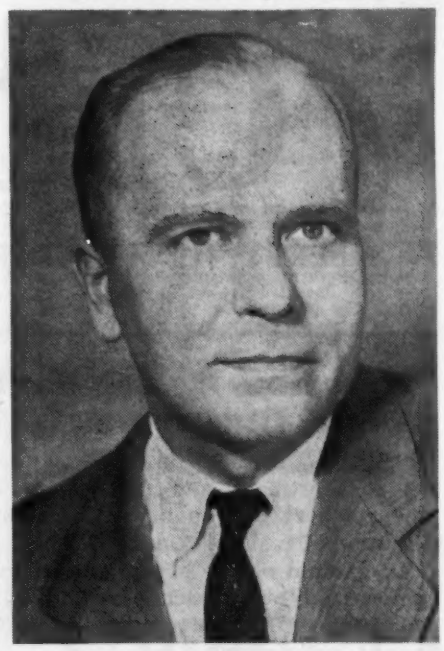
Freeport Sulphur Co. announced a reduction of $3 a ton in its domestic and export sulphur prices.

Both firms said that competitive conditions were responsible for the decreases.

TVA CONFERENCE

STATE COLLEGE, MISS. — Tennessee Valley Authority and Mississippi State College representatives and fertilizer distributors will hold a conference here Oct. 25.

"Some of these suppliers give pretty good sales talks."



R. P. Kessler

TO HEAD RESEARCH — The appointment of R. P. Kessler as director of research and development for the bag and package manufacturing firm of Arkell & Smiths has been announced by S. S. Yates, president and chairman of the board. Mr. Kessler has been packaging engineer and director of packaging research for Arkell & Smiths for 11 years. He is a member of several national industrial technical committees and has written numerous publications about packaging research.

DR. GARMAN

(Continued from page 1)

organizations, agricultural press, radio farm directors and others who work directly with farmers and are concerned with research and educational work related to agriculture.

As chief agronomic consultant to the Institute, he will continue to handle liaison with national professional societies such as the American Society of Agronomy and the Soil Science Society of America, and will continue to work with the National Joint Committee on Fertilizer Application.

Dr. Garman has been with the Institute since its formation on July 1, 1955, and had been chief agronomist of the former American Plant Food Council since February, 1954. Prior to that time, he had been experiment station administrator and principal soil scientist in the Office of Experiment Station, Agricultural Research Service, U.S. Department of Agriculture.

He was graduated from Pennsylvania State College in 1933; received his M.S. degree in 1934 and his doctor's degree in 1939, also from Penn State. Other positions have included head of the department of agronomy, agricultural experiment station, University of Arkansas (1947-49); soil scientist, South Carolina agricultural experiment station (1942-47); assistant and associate professor of agronomy, University of Georgia (1939-42); graduate assistant, Pennsylvania State College (1933-34 and 1936-39); and assistant chemist, Texas agricultural experiment station (1934-36).

He belongs to many professional and honorary societies and has served on many national committees of these groups, particularly those of the American Society of Agronomy. He serves as secretary of the National Joint Committee on Fertilizer Application, and represents the Institute on the national Joint Committee on Grassland Farming.

DR. L. A. STEARNS HONORED

NEWARK, DEL. — Dr. L. A. Stearns, chairman of the department of entomology at the University of Delaware School of Agriculture, was honored Sept. 26 at a banquet for 28 years of service in teaching, extension and research work at the School of Agriculture.

Croplife®

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Northeastern states.

Taxation Relief Could Aid Small Businesses in Trade

Some little relief, taxwise, may be in the offing for fertilizer and pesticide manufacturers, among others who qualify under the government definition of "small businesses." The tax reduction, if any, would not be of such magnitude as to assure a neat profit each year but, if granted, it would take a little of the pressure off of many a harried businessman.

A hearing on the impact of Federal taxation on small business is to be held in Chicago on Tuesday, Nov. 12, according to a recent announcement by Sen. John Sparkman (D., Ala.), chairman of the Senate Small Business Committee. He said that the hearing will be one of a nationwide series being held in connection with his committee's study of small business taxation. The study, he said, will be used as a basis for drafting an omnibus small-business tax bill which will be introduced early in 1958.

Fertilizer and pesticide manufacturers in all parts of the country can get in some effective licks by contacting their congressmen and letting them know how small businessmen feel about the situation. It is well known that a spontaneous wide-spread reaction from individuals who make up the constituency of these lawmakers has a profound influence on their thinking. This, of course, means pleas from people who word their notes in their own manner, rather than using printed or duplicated forms which are too stereotyped to be impressive.

We hope that many in the industry will simply drop a note to their representatives stating that the tax relief for small businesses as outlined in proposed legislation is urgently needed. Lengthy letters are not at all necessary, but if one has a particular situation which needs to be explained, the congressman should be so informed.

Some of the background of thinking on tax revision for small business has been articulated by Hon. Jere Cooper (D., Tenn.) of the Committee on Ways and Means who recently issued information covering the Washington hearings scheduled to begin Jan. 7, 1958. He said that the hearings will have to be concentrated, since the time allocated for this purpose is limited and the hearings will have to terminate by Feb. 7.

Here is what Mr. Cooper declared in the way of background and comment on the general tax situation as regards the basic tax structure:

"The hearings will be conducted for the purpose of re-examining the basic policies underlying our tax laws. They will be utilized as a source of information which will guide the Committee on Ways and Means in formulating proposals looking toward revisions of our internal revenue laws in order to obtain a revenue system which is fair, equitable, neutral in impact between dollars of income from similar sources, responsive to changes in economic conditions, and capable of compliance and administration with a minimum of taxpayer and governmental effort, and which will at the same time produce the needed revenues for the Government. These are objectives which we must continually strive to achieve. They require continuing study and effort.

"There have been increasing criticisms of our Federal revenue system in the last few years. These criticisms relate to the high level of rates, the effects of our tax structure on individual and business incentives and decisions, the complexities of the tax laws, and the distribution of the tax burdens between various segments of the taxpaying public.

"The burden of taxation on our citizens is heavy. It is my hope that some relief from these burdens can be achieved next year as a result of our hearings and study. The combined impact of the individual income tax, the corporate income tax, and the various Federal excise taxes is so great that we are now in the seventh year in which total Federal tax collections have accounted for more than one-fifth of our gross national product. Further, this session of Congress has witnessed the largest Presidential budget in peacetime history.

"Relief from our present burdensome taxes can be achieved by reducing governmental expenditures through the elimination of non-essential and wasteful outlays and by spreading the burden of taxation equitably and fairly among the various groups of the taxpaying public. In accomplishing these results we must be ever mindful to preserve the fiscal integrity of the government and our free enterprise system and to provide adequately for our national security.

"It is highly important that the Congress periodically review the operation of our tax system and the relative tax burdens imposed on our citizens. This permits a re-examination of tax preferences and differentials in our revenue laws to determine if the facts warrant their continuation. The Congress has a duty to the taxpaying public to give it every assurance that all bear their fair burden of necessary taxation. This is given point by the fact that our Federal tax system is a self-assessing system. The forthcoming hearings will permit the Committee on Ways and Means to re-evaluate the equity and fairness of our tax system.

"There are now pending before the Committee on Ways and Means just under one thousand bills relating to taxes. These bills are a manifestation of the proposals and recommendations of interested taxpayers for a revision of our internal revenue laws.

"Among the many subjects in which there is current taxpayer interest are the following: tax burdens under the present rate structure—including exemptions, treatment of earned and investment income, treatment of business expenses, treatment of retirement income and annuities, tax problems of farmers, treatment of the physically handicapped, the current tax payment system—including declarations of estimated tax, tax treatment of capital gains and income treated as capital gains, depreciation methods, treatment of natural resources, treatment of organizations and groups which compute their taxable income on a different basis from ordinary taxpayers, net operating loss deductions, treatment of income from foreign sources, treatment of small and new businesses, the policy of the estate and gift taxes, etc. In addition, there is considerable interest in re-examining the policy questions relative to methods of reporting income for tax purposes and the treatment of Federal tax liens.

"It is my hope that the Committee will receive testimony on these various subjects of current interest. I have listed these merely as illustrative of the problems which are currently of concern to taxpayers. The list is not intended to be exhaustive of the various proposals and problems which involve the matter of tax policy on which it is hoped the Committee will receive testimony in the hearings beginning January 7, 1958.

"It is perfectly obvious that an undertaking of the nature I have here outlined constitutes an enormously formidable task which cannot, in the nature of things, be accomplished overnight. Careful examination and re-examination and revision of our tax laws are probably one of the most complex and time-consuming jobs which faces the Congress, if it is done properly. We intend to take a step in this direction, however, beginning in January and to accomplish as much as we possibly can in the time at our disposal. We also intend to continue in the future in this direction."

Croplife's Home Office

Croplife

BPA — *Member of Business Publications Audit*

NBP — *Member of National Business Publications*

CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is $5 for one year ($8 a year outside the U.S.). Single copy price, 25¢.

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Editor

DONALD NETH
Managing Editor

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MEETING MEMOS

ct. 13-15 — Anhydrous Ammonia Association of Texas, Fifth Annual Convention, Herring Hotel, Amarillo, Texas, T. C. Duffie, Quality Fertilizer Co., Chillicothe, Texas, Secretary-Treasurer.

ct. 25—Conference, Tennessee Valley Authority, Mississippi State College and fertilizer distributors, Mississippi State College, State College, Miss.

ov. 14-15 — Sixth Annual Oregon Weed Conference, Withycombe Hall, Oregon State College, Corvallis, Ore., Rex Warren, Corvallis, Ore., Secretary.

ec. 2-6—Exposition of Chemical Industries, New York Coliseum.

1958

an. 8-10—Northeastern Weed Control Conference, Hotel New Yorker, New York, R. J. Aldrich, Rutgers University, New Brunswick, N.J., Secretary.

EDITOR'S NOTE—The listings bove are appearing in this column r the first time this week.

ct. 2-4—Eleventh Annual Beltwide Cotton Mechanization Conference, Shreveport, La.

ct. 3—New Jersey Fertilizer Conference, Rutgers University, New Brunswick, N.J.

ct. 3-5—Pacific Northwest Plant Food Assn., Annual Convention, Sun Valley, Idaho, Leon S. Jackson, Lewis Bldg., Portland 4, Ore., Secretary.

ct. 7-8 — Western Agricultural Chemicals Assn., Fall Meeting, Villa Hotel, San Mateo, Cal., C. O. Barnard, 2466 Kenwood Ave., San Jose 28, Cal., Executive Secretary.

ct. 9—Annual Range Improvement Field Day, Southern Great Plains Field Station, Woodward, Okla.

ct. 9—Conference on Precautionary Labeling, Park-Sheraton Hotel, New York City, Sponsored by the Manufacturing Chemists Assn.

ct. 9-10—Shell Nematology Workshop, Hotel Kingsway, 108 N. Kingshighway, St. Louis, Mo.

ct. 9-11—Florida Fruit & Vegetable Assn., 14th Annual Convention, Hotel Fontainebleau, Miami Beach, Fla.

ct. 14—Sixth Annual Sales Clinic of the Salesmen's Assn., American Chemical Society, Hotel Roosevelt, New York.

ct. 14-16—Trace Element Symposium, Ohio Agricultural Experiment Station, Wooster, Ohio.

ct. 14-16—Assn. of Official Agricultural Chemists, 71st Annual Meeting, Washington, D.C., Dr. William Horwitz, Box 540, Benjamin Franklin Station, Washington, D.C., secretary-treasurer.

ct. 17—Conference on Chemical Control Procedures for Industry Chemical Control Analysts, Shoreham Hotel, Washington, D.C. Sponsored by National Plant Food Institute.

ct. 18—Association of American Fertilizer Control Officials (States Relations Committee, 8 p.m. Oct. 17), Shoreham Hotel, Washington, D.C., B. D. Cloaninger, Box 392, Clemson, S.C., Secretary-Treasurer.

ct. 21-22—Fertilizer Section, National Safety Congress, LaSalle Hotel, Chicago.

ct. 29—Grassland Farming Conference, Rutgers University, New Brunswick, N.J.

ct. 29-30—Seventh Annual Northwest Garden Supply Trade Show of Oregon Feed & Seed Dealers Assn., Portland, Ore. Masonic Temple.

ct. 29-31—Entomological Society of Canada and Entomological Society of Alberta, Annual Meetings, Lethbridge, Alberta.

Oct. 31—19th annual meeting, Middle West Soil Improvement Committee, Sherman Hotel, Chicago. Z. H. Beers, 228 N. LaSalle St., Chicago, executive secretary.

Oct. 31-Nov. 1—Second Annual Southern Fertilizer Conference and Second Annual Southern Soil Fertility Conference, Dinkler Plaza Hotel, Atlanta, Ga.

Nov. 3-5—California Fertilizer Assn. 34th Annual Convention, St. Francis Hotel, San Francisco, Sidney H. Bierly, General Manager, 475 Huntington Drive, San Marino 9, Cal.

Nov. 6-8—Fertilizer Industry Round Table, Sheraton Park Hotel, Washington, D.C.

Nov. 13-15—National Aviation Trades Assn., Annual Convention, Hotel Adolphus, Dallas, Texas.

Nov. 17-19—National Fertilizer Solutions Assn., Annual Convention, Netherland-Hilton Hotel, Cincinnati, Muriel F. Collie, 2217 Tribune Tower, Chicago 11, Ill.

Nov. 18-20—Carolinas-Virginia Pesticide Formulators Assn., Carolina Hotel, Pinehurst, N.C. W. R. Peele, 516 S. Salisbury, Raleigh, N.C., secretary.

Nov. 18-22—American Society of Agronomy, Annual Meeting, Atlanta Biltmore Hotel, Atlanta, Ga.

Nov. 20-21—Ohio Pesticide Institute, Annual Winter Meeting, Neil House, Columbus, Ohio, J. D. Wilson, Ohio Agricultural Experiment Station, Wooster, Ohio, Secretary.

Nov. 21—New Jersey Entomological Society, Fall Meeting, New Brunswick, N.J.

Nov. 25—Oklahoma Fertilizer Dealers Conference, Oklahoma State University, Stillwater, Okla.

Nov. 25-26—Entomological Society of America, Eastern Branch Meeting, Commodore Hotel, New York, B. F. Driggers, New Jersey Agricultural Experiment Station, New Brunswick, N.J., Branch Secretary.

Nov. 26—Oklahoma Soils and Crops Conference, Oklahoma State University, Stillwater, Okla.

Dec. 1-3—Southern Seedsmen's Assn., Jung Hotel, New Orleans.

Dec. 2-5—Entomological Society of America, 5th Annual Meeting, Hotel Peabody, Memphis, Tenn., R. H. Nelson, 1530 P St., N.W., Washington 5, D.C., Executive Secretary.

Dec. 2-5—Cotton States Branch, Entomological Society of America, 32nd Annual Meeting, Hotel Peabody, Memphis, Tenn., M. E. Merkl, Box 202, Leland, Miss., Secretary-Treasurer.

Dec. 3-4—Iowa State College Fertilizer Manufacturer's Conference and Fertilizer Dealers' Short Course, Memorial Union, Iowa State College campus, Ames, Ia.

Dec. 4-6—Soil Science Society of Florida, Annual Meeting, Fertilizer Symposium on Dec. 5, University of Florida, Gainesville.

Dec. 5—Second Annual New Mexico Irrigation Exposition, Eastern New Mexico Fairgrounds, Roswell, N.M.; Al W. Woodburn and William Harr, c/o Southwest Public Service Co., Roswell, co-chairmen.

Dec. 8-12—Vegetable Growers Association of America convention, Jung Hotel, New Orleans, La.

Dec. 9-12—Chemical Specialties Manufacturers Assn., Hollywood Beach Hotel, Hollywood, Fla.

Dec. 10-12 — North Central Weed Control Conference, 14th Annual Meeting, Hotel Savory, Des Moines, Iowa. Lyle A. Derscheid, agronomy department, South Dakota State College, Brookings, Program Chairman.

Dec. 11-13 — Agricultural Ammonia Institute, Seventh Annual Meeting, Hotel Marion, Little Rock, Ark., Jack F. Criswell, Claridge Hotel, Memphis, Executive Vice President.

Dec. 12-13—Beltwide Cotton Production Conference, Hotel Peabody, Memphis, Tenn.

1958

Jan. 7-8—Texas Fertilizer Conference, Texas A&M, College Station, Texas.

Jan. 13-15, 1958—Weed Society of America and Southern Weed Conference, joint meeting, Peabody Hotel, Memphis, Tenn.

Jan. 14-15—Georgia Plant Food Educational Society, Annual Meeting, University of Georgia, Athens, Ga., Fielding Reed, 710 Mortgage Guarantee Bldg., Atlanta, Ga., Secretary-Treasurer.

Jan. 20-21—Pest-O-Rama, sponsored by the Alabama Association for Control of Economic Pests, Coliseum, Montgomery, Ala., W. G. Eden, P.O. Box 626, Montgomery, Ala., Secretary-Treasurer.

Jan. 21-22—North Carolina Pesticide School, College Union Bldg., North Carolina State College, Raleigh.

Jan. 21-23—California Weed Conference, San Jose, Cal.

Feb. 13-14—Agronomists-Industry Joint Meeting, Edgewater Beach Hotel, Chicago, sponsored by the Middle West Soil Improvement Committee, Z. H. Beers, 228 N. LaSalle St., Chicago 1, Ill., Executive Secretary.

Feb. 20-22—Nitrogen Conference, University of Minnesota, St. Paul. M. W. Mawhinney, Smith-Douglass Co., Albert Lea, Minn., Chairman.

March 4-5—Western Cotton Production Conference, Hotel Cortez, El Paso, Texas, Conference Sponsored by the National Cotton Council and the Five State Cotton Growers Assn.

June 15-18—National Plant Food Institute, Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 25-27—Pacific Branch, Entomological Society of America, San Diego, Cal.

July 18-19—Southwest Fertilizer Conference and Grade Hearing, Buccaneer Hotel, Galveston, Texas.

Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge $2.25. Situations wanted, 10¢ a word; $1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Commercial advertising not accepted in classified advertising department. Advertisements of new machinery, products and services accepted for insertion at minimum rate of $10 per column inch.

All Want Ads cash with order.

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CLASSIFIED ADVERTISING

Olin Mathieson to Offer Stock in Sale

NEW YORK—Olin Mathieson Chemical Corp. has announced that, subject to market conditions and compliance with legal requirements, it intends to sell $60,000,000 of subordinate debentures which will be convertible into common stock. The new issue will be sold publicly through an underwriting group headed by Dillon, Read & Co., Inc. and Eastman Dillon, Union Securities & Co.

Purpose of the financing, the company said, will be to provide the additional working capital needed in connection with the development of the corporation's business during the next few years. Present plans call for completion of the financing prior to the end of the year.

At the same time it was announced that a special meeting of stockholders had been called for Nov. 5, 1957, to vote on a proposal to increase the number of authorized shares of common stock of the corporation from 15,000,000 shares to 20,000,000 shares. The additional shares will be available for issuance upon conversion of the new debentures, for future financing and for other corporate purposes.

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FOR RICHER FIELDS
Croplife
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A WEEKLY NEWSPAPER FOR THE TWO BILLION DOLLAR AGRICULTURAL CHEMICAL INDUSTRY
AUGUST 23, 1954
Cover Crop Provisions of ACP Outlined
Impact of Farm Law on Industry Hinges on Diverted Acre Policy
Fall Fertilization, Need for Balanced Fertility Stressed at Wisconsin Ammonia Meeting
Minnesota Armyworm Campaign Saves $40 Million
INSECT, PLANT DISEASE NOTES
See Page 4

Serving the Agricultural Chemical Industry . . .

Croplife is the weekly *news*paper for all phases of the industry from the manufacturers of basic chemicals down the production and distribution chain through the retail dealers. Croplife reaches *all* the key men in the industry. These groups are reading Croplife:

- **Fertilizer manufacturers, mixers and suppliers of fertilizer ingredients**
- **Formulators of Pesticides, Herbicides and other Farm Chemicals**
- **Retail Dealers selling fertilizer, farm chemicals and other farm supplies; Custom Sprayers, Pest Control Operators, and Nurserymen**
- **Farm Advisor Group—county agents, agriculture department officials, extension and experiment station personnel, soil conservation men, bankers and consultants**

Croplife, with a publishing schedule every 168 hours, is reporting news to the industry while it's still news! A staff of 21 crack newsmen in key U.S. cities and backed by 100 special correspondents provides the stop-press coverage of the industry required by readers who make the command decisions.

Croplife's unique distribution plan permits advertising (1) on the national level to the manufacturing core of the industry, and (2) on the regional basis to the marketing segment of the market. Ask a Croplife representative to elaborate on this in terms of your product!

Your advertisement in Croplife will share the *impact* and *import* of Croplife as it reports weekly to the men who create action in the agricultural chemical field.

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